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ABSTRACT

A primary grades specialist implemented a 10-week practicum intervention designed to increase third graders' social skills by training their teachers in cooperative learning techniques and providing cooperatively structured lessons. Eight skills were addressed; these included the skills of accepting peers' ideas for group activities, completing tasks on time, and following directions. Teachers participated in eight weekly in-service sessions. These sessions concerned the research basis for using cooperative learning, a description of the concept, teacher and student roles, ideas for implementation, a management system, and cooperative lessons for students. Videos were shown that introduced cooperative learning and offered a view of students engaged in cooperative learning sessions. A "quality circle" team was organized for the purpose of brainstorming for ideas and reviewing the teacher in-service program and materials. Students were provided with lessons that were structured for cooperative learning in reading, spelling, and mathematics. It was expected that the intervention would improve students' social skills and task completion times and teachers' knowledge of techniques for teaching social skills. Practicum evaluation data indicated that the intervention was successful. Related materials, including a teacher training manual on cooperative learning, are appended to the document. (RH)

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INCREASING THIRD GRADE SOCIAL SKILLS THROUGH COOPERATIVE LEARNING TECHNIQUES

by

Mona Layne Fulton

A Practicum Report
submitted to the Faculty of the Center for the Advancement of Education of Nova University in partial fulfillment of the requirements for the degree of Master of Science

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Authorship Statement

I hereby testify that this paper and the work it reports are entirely my own. When it has been necessary to draw from the work of others, published and unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of other workers in the field and in the hope that my own work, presented here will earn similar respect.

Mona Layne Fulton

Mona Layne Fulton

Abstract

Increasing Third Grade Social Skills Through Cooperative Learning Techniques.
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Descriptors: Collaborative Learning/Peer Coaching/ Peer Tutoring/Team Learning.

The high percentage of third grade students receiving below satisfactory grades in "Social and Work Habits" on the report card and identified by teachers in a survey as lacking basic social skills was addressed by the implementation of a cooperative learning program. A ten week teacher inservice program which included four cooperatively structured student lessons was implemented. A Quality Circle team approach was used as a leadership component of the program. The Quality Circle included third grade teachers, a Primary Specialist and a fifth grade teacher from nearby schools who are training teachers in cooperative learning techniques, a Staff Development Specialist and the author, a Primary Specialist at the target site. A student social skills checklist (adapted from a larger questionnaire by Gresham and Elliott) was used as a pretest and posttest instrument. Teachers were also given a writer developed pretest and posttest to assess their knowledge of cooperative learning techniques. It was concluded that the cooperative learning inservice increased teacher knowledge and student social skills. Appendices include: student social skill checklist, teacher pretest and posttest on cooperative data showing the need for the program, and results of the program implementation.

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Chapter I

Purpose

Background

The target site is an Elementary School located in a large county in the east central region of Florida. The school has a student population of 845 full-time students, who range in age from three to 13. In addition to the basic Kindergarten through Sixth grade program, the school serves 55 children in various Exceptional Education programs. These include the Physically Impaired classes and the Early Exceptional Learning Program (EELP) serving pre-school children. Students in both programs have varying exceptionalities. The school also provides a Specific Learning Disabilities (SLD) Program serving 29 children on a resource basis. One hundred forty-five students in the Gifted Student Program (GSP) are also served at this site, including children from five neighboring schools.

The socioeconomic level of the student population is varied; one third come from lower class backgrounds, one third come from middle class backgrounds, and one

third from upper middle class homes. Eighty-six percent of the population is white, while the remaining 14 percent is from minority populations, predominantly black (10.5 percent) with a few Asian (1.5 percent) and Hispanic (1.9 percent) children included. Children from traditional families are becoming a minority with 168 children in single parent homes and 482 children in homes with two working parents. Thirty percent are receiving free or reduced lunches (Annual Report, 1988-89 and Fall Student Survey, 1989.)

The faculty includes 82 certified teachers and other support personnel. The administrative staff includes the principal and assistant principal. Just as the administrators are supportive of the instructional team, the community strongly supports the school. Volunteers donated over 7,200 hours in a variety of ways: advisory committee, room mothers, media center, Kindergarten, clinic and classroom (Annual Report, 1988-89).

The building is designed in an "open-space" plan and includes eight learning center complexes--each containing four classroom areas. The media center is in the center of the school and opens onto the

classrooms. A computer lab, with 15 computers, is housed here and each individual complex has a central mini-computer lab, containing from one to ten computers. Fifteen portable classrooms are housed behind the main school building. An addition to the present site will be built beginning in the summer of 1990, to help alleviate the present over-crowding. This addition will include: a cafeteria, kitchen and stage area; a music suite; resource rooms; five pre-school classrooms; and eight primary and intermediate classrooms.

The writer has served this school for a nine and one half year career in education, including five years as a Kindergarten teacher and three and one half years as a Transitional Kindergarten teacher. At the present time, the writer holds a Bachelor of Science degree in Elementary Education with certification in Early Childhood Education and is the Primary Specialist at the school. In this position, the writer serves students, teachers and parents in Kindergarten through Third grade. Primary Specialist duties also include testing new students, in-servicing teachers, counseling parents and acting as a liaison between teachers and

administrators on the building and county level. Through working with students and teachers in these grades, the writer sees a need for improved social skills among students.

Statement of Problem

The problem for this Practicum Project was identified in terms of its general importance for the field of education, how it was viewed in related educational settings and the target site. In addition, data was presented to illustrate the impact of this problem on the identified target group. Component causes related to this problem and/or the success of the target group was also discussed.

"We must change the way we do business in education...because business is depending on it. In fact, our entire economic survival is depending on it," says Betty Castor, Florida Commissioner of Education in the preface of the booklet "Blueprint for Career Planning," published in 1988 by the Florida Department of Education. American business leaders are calling out for workers who are qualified not only in their area of expertise, but also in interpersonal relations skills and decision-making abilities. In a recent

workshop on Cooperative Learning, Marsha Osborne (1989), Primary Specialist, stated that the Wall Street Journal reported that 80 percent of people who were fired from their jobs were fired, not because of a lack of knowledge or skill to do the task, but rather because they were unable to interface cooperatively with their peers (and the author would include "and their superiors"). Researcher, Robert Slavin (1981), goes one step further by stating that "the key to our survival is our ability to apply our intelligence to cooperation with others to accomplish our goals."

Kain (et al, 1988) agrees with this thinking in stating that social behavior must be taught, learned and mastered just as any other acquired skill. These skills are a type of "second language" used when interfacing with others. Kain cites Carteledge and Milburn (1980) as stating that in this highly technological society more children are growing up without the social skills necessary to cope in a competitive world. London (1987) states that E. Mauis Heatherington predicts that between 40 percent and 50 percent of children born within the last 20 years will at some time live in a single parent family. Forty

percent of black children and 20 percent of all children in the United States already do. The situation at the target site is in keeping with these national figures. Twenty percent of the target school population (168 of 845) is living in single parent homes. London marvels at the number of over-burdened single working parents who are able to find the time and energy to model appropriate social skills and decent values. He feels we should not be surprised at those who do not. With situations such as this in the home setting it is even more important than ever that educators teach social skills.

This Practicum was concerned with the social skill development of third grade students. The eight skills assessed were:

- Gives compliments to peers
- Accepts responsibility for actions
- Cooperates with peers without prompting
- Accepts peers' ideas for group activities
- Listens to others
- Uses time wisely
- Completes tasks on time
- Follows directions

(Checklist adapted from the Grades K-6 Social Skills Questionnaire by Gresham and Elliott.)

The status of social skills in the target site and six related educational settings was assessed through the use of teacher needs surveys (Appendix A: 54). Teachers were asked to rank five social skills in order of importance with one being the highest and five being the lowest in importance. Teachers at all sites felt it was most important for third graders to accept responsibility for their actions (Appendix B: 56). The majority of teachers (those at six out of seven schools) ranked listening to others as the second most valued skill. Cooperating with peers without prompting and accepting peers' ideas for group activities held third or fourth place ranking at most sites while giving compliments to peers was rated as least important of the five skills. Three teachers assigned equal values to all five social skills saying they were all important. The writer would agree that these skills are all valuable, that is why they were chosen from the larger social skills checklist. In working with teachers, students, and parents as Primary Specialist, as well as classroom teacher, the writer

found these skills necessary for optimum social functioning in the classroom.

Teachers then listed the number of students who display the social skills they rated as top three in importance (Appendix C: 58). The average percentage for the target site and the six related sites was 64 percent. Percentages for individual schools ranged from a low of 37 percent to a high of 75 percent of the students displaying the most important social skills. At the target site, the percentage of students who display the most important social skills was 72 percent. These percentages show a need for improvement in third grade social skill development at the target site and related educational settings.

WHAT IS: Only 72 percent of the third grade students displayed the social skills deemed most important by their teachers.

WHAT SHOULD BE: Eighty-five percent of the third grade students should have displayed the social skills deemed most important by their teachers.

DISCREPANCY: Thirteen percent of the target group are performing below expectations.

In interviews with the third grade teachers at the target site and two comparable schools, concern was expressed regarding a social/work habit directly relating to academic performance. The teachers felt too many students were not completing tasks on time. This writer then reviewed last six weeks' report cards for the target group paying particular attention to the skills "Uses time wisely" and "Completes assignments." In the Social and Work Habits section of the report card, the grades of S (satisfactory), N (needs to improve), and U (unsatisfactory) are used to report progress. Fifteen percent of the third grade students received a grade of N or U in the skill area "Uses time wisely" (Appendix D: 60). Since this was the skill area with the greatest number of children receiving less than satisfactory grades, the teachers' concerns were substantiated. Students also had difficulty in the area of "Respects rights of others" (14 percent received less than satisfactory grades) and "Follows directions" (13 percent received less than satisfactory grades) (Appendix D: 60).

The data shows a need for improvement in social skills of the third grade students at the target site.

This practicum sought to implement a program that would facilitate this process.

Outcome Objectives

The purpose of this project was to improve the social skills of third grade students by training their teachers in cooperative learning techniques. The degree of progress was measured by a comparison of pre and post-training social skill checklist scores of students over a 10 week period.

Objective 1

After the third grade teachers participated in a 10 week inservice program, it was expected that at least 80 percent of the target students would increase in three of the eight social skills rated on the social skills checklist adapted by the writer from the Grades K-6 Social Skills Questionnaire by Gresham and Elliott.

Objective 2

After the third grade teachers participated in a 10 week program 80 percent of the target students would increase their frequency of completing tasks on time as evidenced on the social skills checklist.

Objective 3

One hundred percent of the teachers participating in the inservice would increase, by one mean score, their knowledge of techniques for teaching social skills as measured by pretest and posttest surveys created by the writer.

The Leadership Evaluation Instrument (Appendix F: 64) was used to evaluate the effectiveness of the author's leadership effectiveness, which was critical to the success of this project. It was expected that 100 percent of the Quality Circle members would rate the leader effectiveness of this writer with a level 4 or better.

The above objectives were considered to be reasonable and realistic for the target group and the author because they were manageable with time, money, and resources available.

Chapter II

Research and Solution Strategy

Research

In reviewing the literature concerning programs to enhance the social skill development of elementary school children, there were several promising alternatives.

Pruztman (1983) through "The Children's Creative Response to Conflict Program" uses the themes of cooperation, communication, affirmation and conflict resolution to teach social skills and create a peaceful classroom environment. In order for successful cooperation to take place, each child must understand that their effort contributes to that of the whole. Successful cooperation achieves the following goals:

1. affirms the individual and the group
2. helps children appreciate other people's point of view
3. provides experience which can later be transferred into more difficult cooperative tasks.

Cooperation and affirmation activities were discussed. Examples of cooperation activities included:

1. Cooperative drawing of an imaginary creature
2. Group hand prints
3. Group shadow murals
4. Rainstorm - a circle game in which the children simulate cooperatively the sounds of a rainstorm

Through affirmation activities children feel better about themselves and others. These included:

1. Interviewing - using the social skills of listening and praising
2. Affirmation show - video tape children saying something positive about themselves
3. Affirmation clapping
4. Pantomime activities

The CCRC program has been successful in helping shy children gain confidence in front of groups. Also, while the program provides successful experiences in the group setting, it also focuses attention on their individual interests.

Structured learning is another means of teaching social behaviors. It is characterized by systematic

direct instruction and incorporates four elements: modeling, role playing, performance feedback, and transfer of training (Anderson et al cited Goldstein, Sprafkin, Gershaw, and Klein, 1983; McGinnis and Goldstein, 1984). In this method teachers evaluate the students' interpersonal and intrapersonal behavioral skills, then structured learning procedures are used to correct deficiencies.

As the title implies, structured learning follows a sequential order of presentation. A single social skill is taught at a time in small groups of five to eight students by one or two teachers. The teacher begins the modeling stage by giving examples of the skill being used in different settings and breaks the skill down into its behavioral steps. Next, modeling is demonstrated followed by a group discussion in which the modeling is related to students' lives inside and outside school.

Role plays are developed from examples used in the group discussion and serve as rehearsals for real-life circumstances that may occur. The teacher coaches students through this process and then asks for feedback including praise and constructive criticism.

The goal is to provide support for the main actor in the role play and improve effectiveness in using the given skill.

The final step in the procedure is to transfer the training to real life settings. This is done through "overlearning" and "real-life reinforcement." "Overlearning" occurs when students practice the skill in different situations and over long periods of time. "Real-life reinforcement" can take the form of other teachers reinforcing the skills by also giving students feedback in their classrooms.

Glasser, as cited by Gough (1987), stated that in order to enhance development of social and academic skills of student, schools must change. Students, as well as adults, search for ways to satisfy their needs for love, belonging, caring, sharing, and cooperation. If these needs are not met, students will pay little attention to academic subjects but rather will desperately search for friendship and acceptance. This search can lead to behavioral problems.

Glasser sees the need for power at the core of almost all school problems. In order to convince students to work hard, we must meet their need for

power. This need for power is closely tied to a need for control. Glasser feels our needs for love, power, fun, and freedom must be satisfied on a regular basis in order for us to gain effective control of our lives.

According to Glasser, at least half of the students in our schools are making little or no effort to learn because they do not believe school satisfies their needs. He does emphasize the importance of teamwork in meeting these needs. Glasser proposes the use of learning teams and other control-theory approaches in the classroom. He suggests we take a lesson from extracurricular subjects such as sports, bands, and clubs. In these activities students and teachers work together toward common goals; the success of the group depends on the success of the individual members. Students feel a stronger sense of responsibility than when they are working alone. Through these methods the social and power (control) needs of the students can be met and therefore performance will be increased.

In their review of research on models of teaching Joyce, Showers, and Rolheiser-Bennett (1987) examine student-centered or personal models. Nondirective

teaching is one such model. They cited the work of Roebuck, Buhler and Aspy with students having learning difficulties. The use of nondirective teaching methods produced positive effects on self-concept, intergroup attitudes and interaction patterns, and achievement in reading and mathematics; students scores on intelligence tests also increased. Teaching that instructs students to think divergently while emphasizing self-concept development can improve student achievement and social skills.

Bernice McCarthy (1986), in her 4Mat System, identified four major learning styles: Types One, Two, Three and Four. Type one learners are interested in personal meaning. Type two learners want to know the facts. Type three learners want to know how things work while type four learners are interested in self-discovery. McCarthy stated students should be taught in all four ways. In this manner, students will come to accept and learn to use their strengths while developing a respect for the learning styles of others.

According to Robert Slavin (1987), cooperative learning refers to a setting where students work in small, mixed ability learning groups. The groups

usually consist of one high achiever, two average achievers, and one low achiever. The students in each group are responsible for their learning as well as helping other group members learn. Therefore, students learn from each other through acting as both teacher and learner. This interaction yields several positive results. Children are often better able to translate the teacher's words into words that are better understood by other children. Second, students can give more individual attention and help to one another because they can work one-on-one.

On a cooperative learning team there is nowhere for individuals to hide and avoid responsibility for learning. There is, however, a non-threatening environment in which students can feel freer to take risks and ask for help. A "We're all in this together" attitude is established in the cooperative classroom or as Johnson and Johnson (1988) state, a "We sink or swim together" atmosphere exists.

Research has shown that two conditions must exist in order for cooperative learning to be effective:

1. Students must be working toward a group goal.

2. Success at achieving this goal must depend on each group member learning.

Through group goals, students come to value each other's achievement. Asking one another for help becomes more acceptable when the goal is shared by the team. Group success must be based on the sum of individual performances of all group members.

Studies of cooperative learning in varied settings have yielded positive results both in academic and social skills. In the social skill area, positive outcomes have been found in race relations, acceptance of mainstreamed academically handicapped classmates and student self-concept and school enjoyment.

Johnson and Johnson (1987, 1988, and 1989-90) identified five basic elements of cooperative learning:

1. Positive interdependence - everyone must work together for a common goal in a caring atmosphere.
2. Verbal face-to-face interaction - students need to explain, argue, elaborate and synthesize material they have learned.
3. Individual accountability - everyone must do their part of the learning.

4. Cooperative (social) skills - students need to learn appropriate leadership, communication, trust building, and conflict resolution skills.
5. Group processing - groups assess how well they are working together and how they could improve their effectiveness.

Although cooperative learning may take many forms they all would contain the above elements.

McElroy (1989) discusses some of the various forms of cooperative learning.

Student Team Learning (Slavin, 1986)

1. Student Teams Achievement Divisions (STAD) - has five major components: total class participation, teams, quizzes, individual improvement scores, and team recognition.
2. Teams-Games-Tournaments (TGT) - Similar to STAD but tournaments replace quizzes and individual improvement scores.
3. Jigsaw II - used when the material to be studied is written in a narrative form. Members of "expert groups" learn about a specific topic then return to their original teams to teach what they learned about the topic.

Other Cooperative Learning Methods

1. Buddies Club (developed by Sandra Rolef, Glen Haven Elementary) - used with three to five year old children enrolled in special education classes. Through this pairing children develop language, social/emotional, and cooperation skills.
2. Think-Pair-Share (Lyman, 1981) - involves four major components: students listen as the teacher poses a question to the entire class; they think about what the teacher asks and give some possible solutions; students work in pairs to discuss their responses; and they share those responses with the whole group.
3. Round Table (Kagan, 1985) - heterogeneous groups are given a worksheet to complete (sometimes using manipulatives). Each student completes one problem or task and passes the materials to the person on their right. This continues until the task is finished. Quizzes are then given to assure individual accountability. To stress cooperation, teams are given awards.

4. The Trading Game (developed by Maureen Murray, Glen Haven Elementary) - used for mathematics problems and problem solving. Four students, grouped heterogeneously, are each given a job: Reader, Manager, Secretary and Checker. The students solve problems changing jobs with each problem. The first team correctly completing the problem is awarded the greatest number of points. The team with the most points at the end of the period receives an award.

McElroy compares the characteristics of a traditional classroom to that of a cooperative classroom.

Traditional	Cooperative
1. The teacher is in complete control.	1. All group members share leadership - the teacher acts as a facilitator.
2. Homogeneous grouping	2. Heterogeneous grouping
3. Students are graded and awarded individually.	3. Students are graded and awarded as a group.

4. Students are competitive.	4. Although there may be competition between groups, students within groups cooperate.
5. One student's success may make it more difficult for others to succeed.	5. One student's success helps others to achieve their goals.

Slavin, Madden, and Stevens (1989/90) have developed two other programs for learning cooperatively: Team Assisted Individualization (TAI) and Cooperative Integrated Reading and Composition (CIRC). These methods are curriculum specific. TAI is used for mathematics instruction while students are instructed in reading and language arts through the CIRC program. The results of both programs have been positive. On average, TAI classes gained twice as many grade equivalents as the control group did. The positive results of TAI were found to be true for high, average and low achievers, and academically handicapped as well as non-handicapped students. Improvements were

also found in the affective domain including: self-concept in math, enjoyment of math class, classroom behavior, race relations, and acceptance of mainstreamed academically handicapped students (Slavin, 1985). In the CIRC program, students averaged gains of approximately two-thirds of a grade equivalent more than control students on the California Achievement Test. As with TAI students, equal gains for students of all skill levels were seen, although mainstreamed academically handicapped students made particularly impressive gains (Slavin et al, 1988).

Roy Smith (1987) cites four positive aspects of cooperative learning: it places the responsibility for learning on the students; increases achievement; improves students' attitudes toward school, learning and classmates; and makes teaching and learning more fun.

Smith, using the cooperative learning model of Johnson and Johnson, offers some practical steps toward helping students learn social skills through cooperative learning techniques (Smith, 1987). Teachers should:

1. Explain the difference between cooperation, competition and independent work and ask students to help list ways they can cooperate, including sharing materials, contributing ideas, encouraging others to participate, and accepting the ideas of others.
2. Help students understand how to put skills into practice by watching them in groups and commenting on how they function.
3. Provide practice sessions to reinforce specific skills.
4. Provide feedback on how well each student performs a skill you're concentrating on.
5. Reinforce cooperation skills over and over again.

When setting up student groups, teachers need to balance teams by academic ability, race, gender, and social skill ability. Bernagozzi (1988) suggests changing teams each six weeks to maintain their balance. He also encourages teachers to persevere with cooperative grouping. At first, conflicts may intensify because children may feel uncomfortable in their new roles and resort back to familiar behavior patterns even if they are negative. Prejudices may

surface, loners might find it difficult to share, aggressive children may try to dominate and high achievers might act superior. However, once students see the academic benefits of working together many of these problems disappear and helping one another becomes automatic.

Solution Strategy

In surveying the six neighboring school to which the target site was compared (Appendix B: 56) the writer found that all schools shared some common activities to improve social skills. These included:

- Assertive discipline plans
- Programs given by the guidance counselor for individual classes. These include group discussions and role playing.
- Various forms of group work
- Drug abuse prevention curriculum which stresses positive self-concept
- Awards

Other activities listed by some schools included "Show and Tell," modeling by the teacher, homework games, sports, and assemblies. One third grade teacher at each of four of the six neighboring schools stated that

they were using cooperative learning groups as a method for teaching social skills.

All of the alternatives offered in the research section of this practicum are viable solutions to the problem of a need for improved social skill development and academic enhancement of students. The "Children's Creative Response to Conflict" program focuses on children's individual interests and helps them feel positive about themselves and others. Also, students come to understand the importance of their contribution to the group as a whole and to appreciate others' perspectives. Structured learning offers a sequential method for teaching social skills. Through Glasser's control theory method the important needs for power, love, fun and freedom are met and therefore students feel a sense of control over their lives. When student needs are met, learning will take place. The importance of teamwork is emphasized, the success of the team depends on the success of individual members. Student-centered or personal models such as non-directive teaching teach students to think divergently while also improving self-concept. In the 4Mat System

students learn to use their strengths while developing a respect for the learning styles of others.

While these are all viable alternatives, the cooperative learning model is more comprehensive. It has proven effective in simultaneously developing both social and academic skills. Cooperative learning techniques offer systematic ways to develop social and academic skills but yet allow room for variation and innovation within the general framework. Sergiovanni (1984) in discussing the characteristics of excellent schools, refers to "freedom with restrictions" as the structure found in excellent schools. The combination of tight structure around specific purposes and freedom for people to pursue these purposes seems most effective. The structure of cooperative learning fits this description.

Many of the strategies currently being used at all district schools and many schools throughout the nation can easily be incorporated into the cooperative learning framework. Such current methods as the whole language approach, process writing, and "hands-on" science approach as well as math and social studies fit well into the cooperative structure. The alternatives

mentioned in the research section could all be used either in part or in their entirety in the cooperative learning design.

Nationally, many schools are experimenting with the concept of "restructuring." Florida's Governor, Bob Martinez, in announcing the 1989 state educational summit called for a restructuring of the state's educational system to include: decentralization of authority and shared-decision making at the school site; a system of accountability which focuses on results; a rigorous program of instruction to develop future citizens who can think for a living; a professional environment that provides rewards for success with students, consequences for failure, and the tools and flexibility required to accomplish the job; and finally active involvement from parents and the business community. Several of the characteristics of a restructured school coincide with the characteristics of a cooperative school. Slavin (1987) lists six factors present in a cooperative school:

1. Cooperative learning is practiced in all classrooms.

2. Special education and remedial services are integrated with the regular program.
3. Peer coaching takes place between teachers. Teachers are responsible for helping one another to use cooperative learning methods successfully and to implement other instructional improvement.
4. Cooperative planning is practiced by teachers in order to plan goals and strategies and prepare shared libraries of instructional materials.
5. A building-level steering committee in which administrators, teachers, staff, and parents meet together to determine the school's direction.
6. Cooperation with parents and community leaders to develop the feeling that everyone is responsible for children's success in school.

The components of peer coaching, cooperative planning, a building-level steering committee, and cooperation with parents and community leaders are shared by both restructuring and cooperative learning philosophies.

Both cooperative learning and restructuring are currently being supported on the district level in which the target site is found. Teachers, administrators, and support personnel are beginning to

receive training in these techniques. With district and school level support, cooperative learning is a more powerful tool for effecting positive change. Effective and sustained training are keys to the success of any new educational program.

As stated in the research section, cooperative learning has been very successful in improving social and academic skills in mainstreamed students and increasing acceptance of such students by their non-mainstreamed classmates. Since the target site has a large population of physically and academically handicapped students, many of whom are mainstreamed, the writer believed that cooperative learning would be of great benefit to all students.

Cooperative learning was the most logical solution strategy to solve this practicum problem. This project was considered reasonable in terms of cost, time, materials, equipment, space and personnel. Costs were minimal because materials are readily available in the school setting. Training, planning and evaluating procedures were carried out during the school day. Support from personnel was strong at both the district and building site level.

Chapter III

Methodology

In implementation of the program, the writer worked with four third grade teachers and their students. The teachers participated in eight inservice sessions occurring once a week during their half hour planning time. The students received instruction through four lessons structured cooperatively. These lessons were taught by the writer and the classroom teachers. Prior to implementation the writer surveyed teachers at the target site and six related educational settings to assess the status of social skills in third grade students. The results showed a need for improvement of these skills. At the target site, 28 percent of the students were not displaying the social skills teachers deemed important.

In interviews, teachers at the target site and two comparable schools expressed concerns that many students were not completing tasks on time. The writer then reviewed the social and work habits section of the

current report cards of the target students, paying particular attention to the skills "Uses time wisely" and "Completes assignments." This review substantiated the teachers' concerns in that 15 percent of the target students were performing less than satisfactorily in using time wisely (Appendix D: 60). Students also had difficulty in the area of "Respects rights of others" (14 percent received less than satisfactory grades) and "Follows direction" (13 percent received less than satisfactory grades) (Appendix D: 60). All data collected supported the fact that social skills among third grade students at the target site needed strengthening.

A review of the literature dealing with the development of social skills furnished the writer with several viable alternatives to enhance social skills. The cooperative learning model was chosen as the most comprehensive and appropriate method. Prior to implementing the program, the writer did extensive research on the cooperative learning model and developed a teacher inservice program. Included in the teacher inservice program were: the research basis for using cooperative learning, a description of the

concept, a discussion of teacher and student roles, implementation ideas, a management system and cooperatively structured lessons. As part of the preparation the writer viewed two videos of one of the Quality Circle team members giving teacher inservices on Cooperative Learning.

The Quality Circle team was used to brainstorm ideas and review the teacher inservice program and packet. This team consisted of the author and three resource personnel specializing in training teachers in Cooperative Learning techniques including: a Staff Development Specialist, fifth grade teacher, and a Primary Specialist/Education Research and Dissemination Group Leader. The four third grade teachers were also members of the Quality Circle team.

Week one began with a meeting between the resource personnel from the Quality Circle team and the writer. At this meeting the team discussed implementation of the program including the topics of: which cooperative lessons to include, management of teaching sample lessons, introduction of the concept with students, topics for overhead transparencies and the pretest and

posttest, and a copyright statement for the training packet.

The writer decided to use cooperative lessons in three subject areas; reading, spelling and math. The author taught an introductory lesson to each class and assisted with and/or observed the three lessons the classroom teachers presented. For the teacher pretest and posttest the team felt short answer and true/false questions were most appropriate.

The Quality Circle team met again during the second week. Plans for the inservice were finalized and the trainer's packet was reviewed. A copyright statement was developed for the trainer's packet. Since material for the packet came from several sources with different copyrights, the statement "Do not copy the materials in this packet. They are available for purchase." was decided upon. The writer included a list of the sources.

The teacher pretest and posttest was reviewed. The inservice and packet were approved.

Before the next session, the writer prepared overhead transparencies and charts. The Intermediate Specialist suggested that the writer limit the amount

of print and create mnemonic devices (pictures) to convey concepts on the overhead transparencies and charts. The teachers later commented on the effectiveness of both materials. The method of presentation was varied throughout each session, including the use of the overhead projector, posters and lecture.

The first teacher inservice occurred during week three. This session began with an overview of the program including a schedule of the inservices, research based reasons for using cooperative learning and objectives for the program. The pretest of knowledge of cooperative learning was administered to the teachers (Appendix H: 68). The need for social skill development in third grade students was discussed. Statistics from the teacher surveys were shared. The session ended with positive comments from teachers concerning the inservice.

A student checklist for each child was distributed and teachers were instructed to bring them to the next session. The writer scheduled a time to visit the third grade learning center complex during the next week for the purpose of informing the children of the

"experiment" and introducing the concept of cooperative learning.

The writer began this session with the third graders by reading the book Drummerhoff in which everyone works together toward the common goal of firing the cannon. This idea was discovered in an article the author read while doing research. The concept of cooperative learning was further explained and goals for the program were shared. The students were encouraged to join their teachers and the writer in becoming "scientists" in our cooperative learning "experiment."

Some "technical difficulties" were encountered in the fourth week. First, our meeting had to be changed from the regularly scheduled day because the writer was scheduled to do testing at another site. When we met on Wednesday, we watched the video "Focus on Education: An Interview with Robert Slavin." The video was used as an introduction to the basics of Cooperative Learning. There was not much time for discussion as planned because the VCR did not work properly and had to be replaced and there were two interruptions from the front office.

During session five the video "Circles of Learning" by Johnson and Johnson was viewed. This video showed both high school and elementary students engaged in cooperative learning sessions. The basic elements of cooperative learning were reviewed and student and teacher roles were introduced. Main points were discussed at the conclusion of the video. One teacher raised the concerns "Is this just another fad?" and "Will we have support from the administration?". Concerning this being a fad, the writer referred to Robert Slavin's thought that cooperative learning is only one tool by which to achieve our goals of teaching academic and social skills. If it continues to be a successful tool, it is assumed that it will be used. Regarding administrative support, the principal expressed support for the cooperative learning program at the target site before sanctioning the current inservice.

The sixth week began with a review of the five basic elements of cooperative learning, a discussion of the teacher's role and a comparison of cooperative learning and traditional classrooms. The writer wore a circus ringmaster's hat while introducing teacher roles

to reinforce the concept of the teacher's role in the classroom being similar to that of the ringmaster. The teacher is an observer/facilitator in the cooperative classroom. The teachers questioned whether parents of high achieving students would accept their children helping the lower achieving students. The writer stated that research reported that most parents who have been educated as to the long-term social skill benefits of cooperative learning are supportive of the concept. Parents realize the benefits of having developed social skills in the work force and satisfying family life. Also, lessons would be structured in a variety of ways so that cooperative learning was one tool among many. Children would continue to have opportunities for individual work and rewards.

At the end of the session, the writer scheduled a time to teach a lesson delineating the differences between cooperation and competition in each classroom. These sessions began with the students contributing words to describe cooperation and competition in a T-chart form. These were reviewed and discussed before beginning work on an activity packet from Our

Cooperative Classroom (Johnson and Johnson, 1988) (Appendix I: 71). Feedback from the students and teachers concerning this activity was positive.

At session seven, the topic of "Getting Started With Cooperative Groups" (Appendix I: 71) was discussed. Subtopics included methods for assigning students to groups, starting up advice, and student roles.

The "Reading Buddies" lesson was discussed (Appendix I: 71). Teachers were asked to implement this lesson before the next meeting and be ready to share results. The writer was available for support and assistance. Also, the teachers were reminded of the library of books and articles on cooperative learning available from the writer.

Week eight began with a sharing session regarding results of implementation of the "Reading Buddies" lesson. Two teachers taught the lesson as it was presented. They felt positive about results and reported that the students stayed on task better than they often did during silent reading time. One child who often has had difficulty working with others, asked his partner if he would like some help! Another

teacher used the lesson during Social Studies class and also reported positive results. The remaining teacher had not done the lesson yet. The writer offered support if needed.

Next, student roles were discussed in greater depth and the cooperative spelling lesson to be implemented next was introduced. The writer adapted the student roles to make them more appropriate for third grade students and listed on an observation sheet the specific skills being stressed (Appendix I: 71). The writer also prepared a set of role cards for use in this and the following lesson. The number of students per group increased from two in the first lesson to three in this lesson. Research done by the writer stated that as the number of students per group increases, so does the possibility of difficulties in social interaction. Therefore, it was suggested that in the beginning of implementation the number of students per group be kept small. This advice was followed.

During the week, the writer was asked into one classroom to observe the spelling lesson which was going very well. The children were on task and

performing their roles. Students who normally have difficulty relating to others were cooperating with their group members. They were talking quietly and helping each other. The teacher later reported that students who do not normally finish their work had completed the assignment, many ahead of time! The writer talked with several children, including both children with good and poor social skills, and they all reported positive feelings about the lesson.

Week seven began with sharing. The teachers had varying ranges of success with the spelling lesson from the very positive experience just mentioned to some difficulty in social skill interaction in the class which has had the most difficulty with social skills throughout the year. The positives were celebrated and solutions to the negatives were discussed. The increase in number of students per group from the last lesson may have been a cause for some of the difficulty in the class. The final lesson "Cooperative Reasoning in Math" was introduced. The teachers would again implement and share results.

The tenth session began with this sharing. Two teachers reported good success with social and academic

skills. The teacher whose class had difficulty with social skills during the last lesson worked more cooperatively this time but had difficulty academically. After some practice, the teacher had the students repeat the math problems and their scores improved.

A review of the main points of the inservice was next. Then the teachers took the posttest (Appendix H: 68), filled out the workshop rating form (Appendix G: 66) and the leadership rating form (Appendix F: 64). The writer presented each teacher with a copy of the book Our Cooperative Classroom in thanks for participating in the program.

Chapter IV

Results

The writer was responsible for all data and judged each objective to be successful if the following criteria was met. Objective 1 was considered fully successful if 80 percent of the target students increased in three of the eight social skills rated on the social skills checklist. A review of the pre- and post-program checklists showed the expectations of the objective were not met. Twenty-two percent of the students improved in three of the eight social skills (Appendix J: 72).

The purpose of Objective 2 was to increase the number of students completing tasks on time. This objective was considered successful if 80 percent of the students increased their frequency of completing tasks on time. On reviewing the pre- and post-program checklists the writer found that this objective was not met. Of the target group, 13 percent increased their frequency of completing tasks on time. An additional 11 percent increased in the related area of using time

wisely. The combined increase in students improving in the related areas of "Completes tasks on time" and "Uses time wisely" was 25 percent (Appendix J: 72).

Several variables might have attributed to Objectives 1 and 2 not being fully successful. The period of implementation was at the end of the school year which is traditionally an extremely hectic time. The writer feels this may have affected student behavior, teachers' responses to the posttest which was done the last week of school, and the writer's availability to lend added support in the classroom setting.

Two teachers did not fully implement the student lessons in the recommended time frame. These two classes contained the students who have had the greatest difficulty with social skills. This may have been corrected if the writer had not been heavily involved in the end-of-the-year activities and been able to spend more time in the classroom helping teach additional cooperative lessons.

The results of the posttest for one of the classes may have been affected by the fact that the regular classroom teacher completed the pretest social skill

survey before going out on maternity leave. The replacement teacher completed the posttest. (The replacement teacher did participate in the entire training program on a voluntary basis.) The replacement teacher, coming in at the end of the school year, was at a distinct disadvantage. The teacher did not have the established rapport that the regular classroom teacher had with the third grade students. The replacement teacher's expectations of the students were not realistic. Therefore, the writer feels this influenced the results of the checklist for that class.

Another element which may have affected the outcomes of these objectives was the fact that the target group as a whole has had great difficulty in social skill areas since entering kindergarten at the target school. Given this circumstance, these expectations may have been too high considering the time of the school year and period of time allotted for student interaction.

The Restructuring Committee recently surveyed the faculty at the target school and found that by an overwhelming margin the greatest concern is discipline. In the fall, the committee plans to examine the current

discipline plan with the goal of improving student behavior and social skills. This further indicates the seriousness of the problem.

One final factor which influenced the outcome of Objectives 1 and 2 was the number of students who received the highest rating in all areas on the pre-program social skill checklist. Eighteen percent of the students were in this category and, therefore, had no room for improvement (Appendix J: 72).

Objective 3 was deemed successful if 100 percent of the teachers participating in the inservice increased by one mean score their knowledge of techniques for teaching skills as measured by pretests and posttests created by the writer. The method used to determine the mean score for the pretests and posttests was to add the scores on all pretests and divide them by the number of teachers taking the test. This procedure was repeated for the posttest. The mean score for the initial test was 3, while the mean score for the posttest was 10. Improvement in the mean score was 7. Therefore, this objective was fully successful since it exceed expectations (Appendix K: 74).

The author's leadership effectiveness was evaluated by use of a Leadership Rating Form. It was expected that 100 percent of the Quality Circle members (third grade teachers) would rate the leadership effectiveness of this writer with a level 4 or better. Results exceeded expectations in that all four members rated the writer at 5, (most effective) in all nine areas. Therefore, this objective was full attained (Appendices L and M: 76 & 78).

Chapter V

Recommendations

Based on positive evaluation by the writer and participating teachers, the writer recommended that the program be continued in the ongoing setting and be made available to other settings. This writer will personally utilize this project within the ongoing setting by continuing the inservice process with teachers from other grade levels. The kindergarten team expressed an interest in cooperative learning training during implementation with third grade which indicates interest in other grade levels. Teachers who participated successfully in the inservice and have begun using the cooperative learning techniques will be asked if they wish to act as peer teachers for those in the training process next fall.

The writer recommends some changes from the original inservice training to further increase development of social skills among students. These include: begin in the fall so as to establish procedures from the beginning of the year, provide a

year-long implementation time line with more student lessons included, and provide more discussion time for teachers as they implement lessons. The writer would suggest that teacher participation be voluntary if possible to help insure the program's success and future growth.

This writer has sent a copy of the training package to the Staff Development Department in the target county. The training model and list of materials is available for distribution to other school districts through the Staff Development Department. The writer is available to perform the teacher inservice training at other schools as needed.

A cadre of Cooperative Learning trainers is presently being formed in the target county. The writer will be part of this cadre and plans to share this training model with the other members of the cadre in the fall.

This training will mesh well with the new Whole Language oriented reading program adopted for use in the fall. Many of the lessons call for Cooperative Learning techniques.

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Personal Interviews:

Target Site: Third grade teachers

Appendix A

Teacher Needs Survey

1. Please rank in order of importance the following 5 social skills you feel third grade students should display.

   1 = Highest importance
   5 = Lowest importance

Social Skill	Ranking of Importance
Gives compliments to peers	_____
Accepts responsibility for actions	_____
Cooperates with peers without prompting	_____
Accepts peers' ideas for group activities	_____
Listens to others	_____

2. How many of your students display the social skills you ranked 1, 2, and 3?

   _____ out of _____

3. What activities do you currently use to teach these skills?

4. How many of your students received the grade of N (Needs Improvement and U (Unsatisfactory) in the area of Social and Work Habits on their most recent report card?

   N _____ out of _____ U _____ out of _____

5. What incentives are used school-wide to improve student social skills?

Please return to your Assistant Principal by Friday, January 26.

Thank you.

Appendix B

Ranking of Importance of Social Skills by Site

School	1st	2nd	3rd	4th	5th
Target Site	B	E	C	D/E	-
School A	B	E	D	A/C	-
School B	B	E	C/D	A	-
School C	B/E	C	D	A	-
School D	B	E	C/D	A	-
School E	B	E	C	D	A
School F	B	C	E	D	A

Appendix C

How many students display the social skills teachers ranked as the top three?

School	Percentage
Target Site	72%
School A	59%
School B	62%
School C	37%
School D	75%
School E	75%
School F	72%

Average Score for all sites - 64%.

Appendix D

Social and Work Habit Grades on the Report Card

For Third Graders at the Target Site

Social and Work Habits	Total number of students receiving the grades N (needs to improve) and U (unsatisfactory)		
	N	U	Total Number
1. Accepts Responsibility	1	1	2
2. Respects rights of others	13	1	14
3. Uses time wisely	14	2	16
4. Respects property of others	3	1	4
5. Completes assignments	5	2	7
6. Follows directions	9	4	13
7. General conduct	10	1	11

Appendix E

Student Social Skill Check List

	Always	Occasionally	Seldom	Never
1. Accepts responsibility for actions	_____	_____	_____	_____
2. Listens to others	_____	_____	_____	_____
3. Cooperates with peers without prompting	_____	_____	_____	_____
4. Gives compliments to peers	_____	_____	_____	_____
5. Accepts peers' ideas for group activities	_____	_____	_____	_____
6. Uses time wisely	_____	_____	_____	_____
7. Completes tasks on time	_____	_____	_____	_____
8. Follows directions	_____	_____	_____	_____

Appendix F

Leadership Rating Form

Please rate the effectiveness of the leader on each scale by marking the number which most closely matches your opinion. Highest values are 5, the lowest 1.

1. The leader had knowledge and expertise.

   1 2 3 4 5

2. The leader displayed ability to involve participants in the learning process.

   1 2 3 4 5

3. It was evident that there was planning and preparation.

   1 2 3 4 5

4. The leader used effective techniques in training.

   1 2 3 4 5

5. The leader was available and helpful.

   1 2 3 4 5

6. The leader provided the necessary activities, materials, and documents.

   1 2 3 4 5

7. The leader was effective in getting the participants to cooperate.

   1 2 3 4 5

8. The leader was successful in keeping the participants on task.

   1 2 3 4 5

9. Rate the overall effectiveness of the leader's style of leadership.

   1 2 3 4 5

Borrowed from Terri Legget, Assistant Principal at Gemini Elementary.

Appendix G

Workshop Rating Form

Please rate this workshop on each scale by checking the number which most closely matches your opinion. Highest values are 5, the lowest 1.

1. Relevance. Did this workshop address topics relevant to your teaching role?

   1 2 3 4 5

2. Future Use. Do you believe that you will have occasion to use concepts or materials from this session in your teaching or other educational role?

   1 2 3 4 5

3. Organization. Was the session well organized?

   1 2 3 4 5

4. Substance. Was the content of the session substantial, important, and thorough?

   1 2 3 4 5

5. Methodology. Did the presenter use effective techniques for accomplishing the purposes of the session?

   1 2 3 4 5

6. Comprehensiveness. Was the training intensive enough in terms of time spent?

   1 2 3 4 5

7. Comments:

Borrowed from Terri Legget, Assistant Principal at Gemini Elementary.

Appendix H

Teacher Pre- and Posttest

Cooperative Learning

1. Name the three ways teachers can structure lessons.

   a.

   b.

   c.

2. What are three of the five basic elements of Cooperative Learning?

   a.

   b.

   c.

3. Name four roles in which a student may serve during cooperative learning groups.

   a.

   b.

   c.

   d.

4. Name three ways in which cooperative classrooms differ from traditional classrooms.

   a.

   b.

   c.

5. In the cooperative classroom, the teacher serves as a _____

   _____

6. Name the four main tasks the teacher must perform in implementing cooperative learning.

   a.

   b.

   c.

   d.

7. In order for a lesson to be structured cooperatively there must be both an _____ and _____ _____ objective.

8. What type of grouping, heterogeneous or homogenous (circle one) is most commonly used in cooperative learning?

9. What is the final step in every cooperative lesson?

10. Name three positive outcomes which can result from using cooperative learning according to research.

    a.

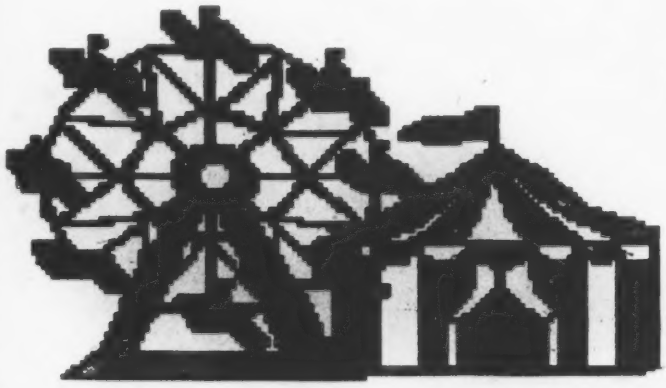
    b.

    c.

Appendix I

Teacher Training Packet

STEP RIGHT UP TO COOPERATIVE LEARNING



Teacher Training Manual

Compiled by

Mona Layne Fulton

Copyright Information

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* Pages may be copied.

Table of Contents

1. Introduction to Cooperative Learning
2. The Teacher's Role in Cooperative Learning
3. Implementation of Cooperative Learning
4. Student Roles in Cooperative Learning
5. Social Skills in Cooperative Learning
6. Group Processing in Cooperative Learning
7. Student Lessons
8. Forms

To the Trainer:

Step Right Up to Cooperative Learning is an introductory teacher training program. A circus theme is used because just as the ringmaster facilitates the operation of the three rings of the circus, the teacher facilitates the interaction of small groups in the cooperative classroom. As they begin implementing the program, teachers should be reminded that although they may feel like they are in a THREE RING CIRCUS they need to persevere. It often takes time for both teachers and students to become comfortable with the process. However, the positive results make it all worthwhile.

Week 1

Meet with teachers for orientation and teacher pretest

Introduction to Cooperative Learning

Teacher Assignment: Evaluate Student Social Skills Checklist. (Pretest)

Week 2

First Teacher Inservice: Video - "Focus on Education: Cooperative Learning Interview with Robert Slavin"

Week 3

Second Teacher Inservice: Video - "Cooperative Learning" with David and Rodger Johnson

Week 4

Third Teacher Inservice

Cooperative Learning: An Overview

Implementing Cooperative Learning: The Teacher's Role

Week 5

Trainer's Assignment - Teach "Cooperation vs Competition" lesson to each class

Implementing Cooperative Learning Reading Buddies

Teacher Assignment: Teach Reading Buddies lesson by next week.

Week 6

Fifth Teacher Inservice

Student Roles, Social Skills

Sharing of implementation results
Sample Lesson - Spelling

Teacher Assignment: Teach spelling lesson by next week.

Week 7

Sixth Teacher Inservice

Processing and sharing of implementation results

Sample lesson - Cooperative Reasoning in Math

Teacher Assignment: Teach math lesson by next week.

Week 8

Teacher review for posttest

Wrap-up

Teacher Assignment: Evaluate Student Social Skills on Checklist (Posttest)

INTRODUCTION

TO

COOPERATIVE

LEARNING

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Basic Elements Of Cooperative Learning

Positive Interdependence

Students must feel that they need each other in order to complete the group's task, that they "sink or swim" together. Some ways to create this feeling are through establishing **mutual goals** (students must learn the material and make certain group members learn the material), **joint rewards** (if all group members achieve above a certain percentage on the test, each will receive bonus points), **shared materials and information** (one paper for each group or each member receives only part of the information needed to do the assignment), and **assigned roles** (summarizer, encourager of participation, elaborator).

Face-To-Face Interaction

No magic exists in positive interdependence in and of itself. Beneficial educational outcomes are due to the interaction patterns and verbal exchanges that take place among students in carefully structured cooperative learning groups. Oral summarizing, giving and receiving explanations, and elaborating (relating what is being learned to previous learning) are important types of verbal interchanges.

Individual Accountability

Cooperative learning groups are not successful until every member has learned the material or has helped with and understood the assignment. Thus, it is important to frequently stress and assess individual learning so that group members can appropriately support and help each other. Some ways of structuring individual accountability are by giving each group member an individual exam or by randomly selecting one member to give an answer for the entire group.

Interpersonal And Small Group Skills

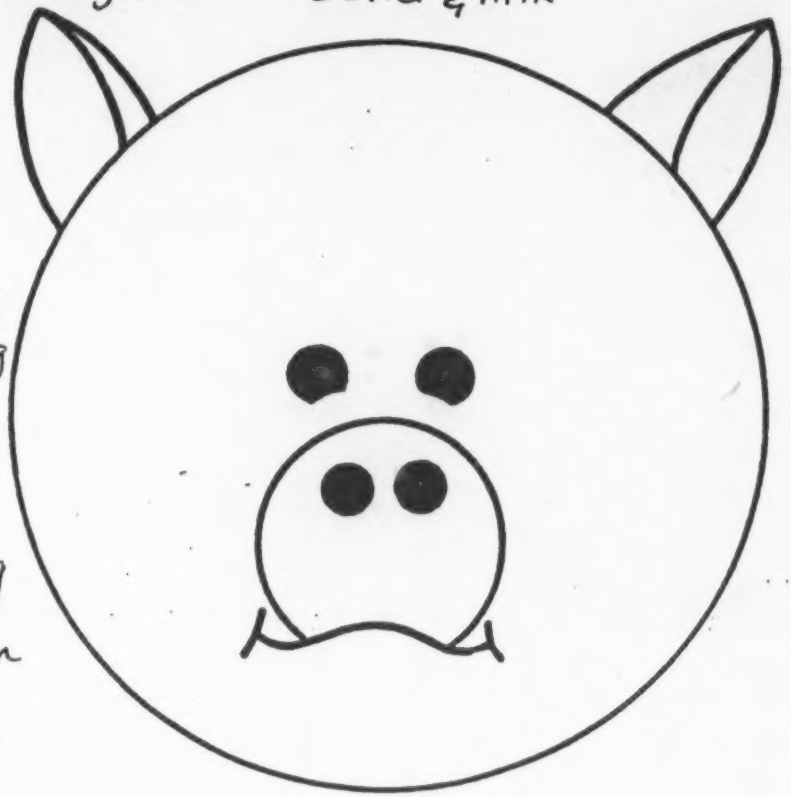
Students do not come to school with the social skills they need to collaborate effectively with others. So teachers need to teach the appropriate communication, leadership, trust, decision making, and conflict management skills to students and provide the motivation to use these skills in order for groups to function effectively.

Group Processing

Processing means giving students the time and procedures to analyze how well their groups are functioning and how well they are using the necessary social skills. This processing helps all group members achieve while maintaining effective working relationships among members. Feedback from the teacher and/or student observers on how well they observed the groups working may help processing effectiveness.

Taken from: Circles of Learning: Cooperation in the Classroom (revised edition). D. W. Johnson, R. T. Johnson and Edythe Johnson Holubec. Edina, MN: Interaction Book Company, 1986.

Positive Interdependence - Kids needing kids
We sink or swim together - bond & link



Individual accountability (randomly picking someone to demonstrate., homework, one sheet

Group processing (name one thing we did well in our group)

Social Skills development

FACE Face to Face interaction
(set up physical space to encourage this)

Pg 1:23 in book

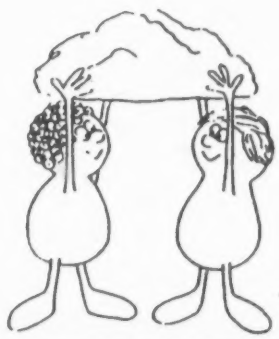
management) are directly taught, whereas in traditional classroom learning groups the interpersonal and small group skills students need to work together effectively are assumed.

8. When cooperative learning groups are used the teacher observes the groups, analyzes the problems they have working together, and gives feedback to each group on how well they are working together. In traditional learning groups teacher observation and intervention seldom take place.

9. In cooperative learning the teacher structures procedures for groups to "process" how effectively they are working, while in traditional learning groups no group processing takes place.

Table 1.1 What Is the Difference?

Cooperative Learning Groups	Traditional Learning Groups
Positive interdependence	No interdependence
Individual accountability	No individual accountability
Heterogeneous membership	Homogeneous membership
Shared leadership	One appointed leader
Shared responsibility for each other	Responsible only for self
Task and maintenance emphasized	Only task emphasized
Social skills directly taught	Social skills assumed and ignored
Teacher observes and intervenes	Teacher ignores group functioning
Groups process their effectiveness	No group processing



THE TEACHER'S ROLE

IN

COOPERATIVE

LEARNING

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The Teacher's Role in Cooperation

Make Decisions

Specify Academic and Collaborative Objectives. *What academic and/or collaborative skills do you want students to learn or practice in their groups? Start with something easy.*

Decide on Group Size. *Students often lack collaborative skills, so start with groups of two or three students; later advance cautiously to fours.*

Assign Students to Groups. *Heterogeneous groups are the most powerful, so mix abilities, sexes, cultural backgrounds, and task orientations. Assign students to groups randomly or select groups yourself.*

Arrange the Room. *The closer the students are to each other, the better they can communicate. Group members should be "knee to knee and eye to eye."*

Plan Materials. *Materials can send a "sink or swim together" message to students if you give only one paper to the group or give each member part of the material to learn and then teach the group.*

Assign Roles. *Students are more likely to work together if each one has a job which contributes to the task. You can assign work roles such as Reader, Recorder, Calculator, Checker, Reporter, and Materials Handler or skill roles such as Encourager of Participation, Praiser, and Checker for Understanding.*

Set the Lesson

Explain the Academic Task. *Prepare students by teaching them any material they need to know, then make certain they clearly understand what they are to do in the groups. This might include explaining lesson objectives, defining concepts, explaining procedures, giving examples, and asking questions.*

* **Structure Positive Interdependence.** *Students must feel that they need each other to complete the group's task, that they "sink or swim together." Some ways to create this are by establishing mutual goals (students must learn the material and make certain group members learn the material), joint rewards (if all group members achieve above a certain percentage on the test, each will receive bonus points), shared materials and information, and assigned roles.*

* **Structure Individual Accountability.** *Each student must feel responsible for learning the material and helping the group. Some ways to ensure this feeling include frequent oral quizzing of group members picked at random, giving individual tests, having everyone in the group write (pick one paper at random to grade), or having students do work first to bring to the group.*

Structure Intergroup Cooperation. *Having groups check with and help other groups and giving rewards or praise when all class members do well can extend the benefits of cooperation to the whole class.*

Explain the Criteria for Success. *Student work should be evaluated on a criteria-referenced rather than a norm-referenced basis. Make clear your criteria for evaluating the groups' work.*

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Specify Expected Behaviors. *The more specific you are about the behaviors you want to see in the groups, the more likely students will do them. Make it clear that you expect to see everyone contributing, helping, listening with care to others, encouraging others to participate, and asking for help or clarification. Younger students may need to be told to stay with their group, take turns, share, ask group members questions, and use quiet voices.*

* **Teach Collaborative Skills.** *After students are used to working in groups, pick one collaborative skill they need to learn, point out the need for it, define it carefully, have students give you phrases they can say when using the skill, post the phrases (praise, bonus points, stars), and observe for and encourage the use of the skill until students are doing it automatically. Then teach a second skill. Consider praising, summarizing, encouraging, checking for understanding, asking for help, or generating further answers.*

Monitor and Intervene

* **Arrange Face-to-Face Interaction.** *The beneficial educational outcomes of cooperative learning groups are due to the interaction patterns and verbal exchanges that take place among students. Make certain there is oral summarizing, giving and receiving explanations, and elaborating going on.*

Monitor Students' Behavior. *This is the fun part! While students are working, you circulate to see whether they understand the assignment and the material, give immediate feedback and reinforcement, and praise good use of group skills.*

Provide Task Assistance. *If students are having troubls with the task, you can clarify, reteach, or elaborate on what they need to know.*

Intervene to Teach Collaborative Skills. *If students are having trouble with group interactions, you can suggest more effective procedures for working together or more effective behaviors for them to engage in. You can ask students to figure out how to work more effectively together. If students are learning or practicing a skill, record on an observation sheet how often you hear that skill, then share your observations with the groups.*

Evaluate and Process

Evaluate Student Learning. *Assess how well students completed the task and give them feedback on how well they did.*

* **Process Group Functioning.** *In order to improve, students need time and procedures for analyzing how well their group is functioning and how well they are using collaborative skills. Processing can be done by individuals, small groups, or the whole class. To start, have groups routinely list three things they did well in working together today and one thing they will do better tomorrow. Then summarize as a whole class.*

Provide Closure. *To reinforce student learning you may wish to have groups share answers or paper, summarize major points in the lesson, or review important facts.*

* *Essential Elements of Cooperative Learning Groups*

considered in selecting the size of a cooperative learning group:

a. As the size of the group increases, the range of abilities, expertise, skills, and number of minds available for acquiring and processing information increase. The more group members you have, the more chance to have someone who has special knowledge helpful to the group and the more willing hands and talents are available to do the task.

b. The larger the group, however, the more skillful group members must be in providing everyone with a chance to speak, coordinating the actions of group members, reaching consensus, ensuring elaboration of the material being learned, and keeping all members on task. Very few students have the collaborative skills needed for effective group functioning and, therefore, the skills have to be initially taught.

c. The materials available or the specific nature of the task may dictate group size.

d. The shorter the period of time available, the smaller the learning group should be. Smaller groups will be more effective because they take less time to get organized, they operate faster, and there is more "air time" per member.

Our best advice to beginning teachers is to start with pairs or threesomes. As students become more experienced and skillful, they will be able to manage larger groups. Six may be the upper limit for a cooperative learning group in most schools—more members would be too large even for very skillful members. In one classroom we recently observed

the teacher had divided the class into "committees" of eight. In the typical committee some students were being left out, others were passive, and some were engaged in a conversation with only one or two other members. Cooperative learning groups need to be small enough for everyone to engage in mutual discussion while achieving the group's goals. So be cautious about group size. Some students will not be ready for a group as large as four.

3. Assigning Students to Groups

There are five basic questions teachers often ask about assigning students to groups:

a. Should students be placed in learning groups homogeneous or heterogeneous in member ability? There are times when cooperative homogeneous learning groups may be used to master specific skills or to achieve certain instructional objectives. Generally, however, we recommend that teachers emphasize heterogeneity of students--placing high-, medium-, and low-ability students within the same learning group. More elaborative thinking, more frequent giving and receiving of explanations, and greater perspective in discussing material seem to occur in heterogeneous groups, all of which increase the depth of understanding, the quality of reasoning, and the accuracy of long-term retention.

b. Should non-task-oriented students be placed in learning groups with task-oriented peers or be separated? To keep such students on task, it often helps to place them in a cooperative

learning group with task-oriented peers.

c. Should students select who they want to work with or should the teacher assign groups? Having students select their own groups is often not very successful. Student-selected groups often are homogeneous with high-achieving students working with other high-achieving students, white students working with other white students, minority students working with other minority students, and males working with other males. Often there is less on-task behavior in student-selected than in teacher-selected groups. A useful modification of the select your own group method is to have students list who they would like to work with and then place them in a learning group with one person they chose plus a few more students selected by the teacher. Teacher-made groups often have the best mix since teachers can put together optimal combinations of students. There are many ways teachers may assign students to learning groups. Some additional ways are:

1. Ask students to list three peers with whom they would like to work. Identify the isolated students who are not chosen by any other classmates. Then build a group of skillful and supportive students around each isolated child.
2. Randomly assign students by having them count off and placing the one's together, the two's together, and so forth. If groups of three are desired in a class of 30, have the students count off by tens.

3. How do desegregation and mainstreaming relate to how teachers assign students to learning groups? In order to build constructive relationships between majority and minority students, between handicapped and nonhandicapped students, and even between male and female students, use heterogeneous cooperative learning groups with a variety of students within each learning group.

d. How long should the groups stay together? For the length of the instructional unit? Actually, there is no formula or simple answer to this question. Some teachers keep cooperative learning groups together for an entire year or semester. Other teachers change group membership often. An elementary school setting allows students to be in several different learning groups during the day. Our best advice is to allow groups to remain stable long enough for them to be successful. Breaking up groups that are having trouble functioning effectively is often counterproductive, as the students do not learn the skills they need to resolve problems in collaborating with each other.

There is merit in having students work with everyone in their class during a semester or school year. Building a strong positive feeling of collaboration across an entire class and giving students opportunities to practice the skills needed to begin new groups can add much to the learning experience. Finally, never underestimate the power of heterogenous cooperative learning groups in promoting high quality, rich and involved learning.

4. Arranging the Room

How the teacher arranges the room is a symbolic message of what is appropriate behavior, and it can facilitate the learning groups within the classroom. The group members should sit in a circle and be close enough to each other to communicate effectively without disrupting the other learning groups, and the teacher should have a clear access lane to every group.

One common mistake that teachers make in arranging a room is to place students at a rectangular table where they cannot have eye contact with all the other members; another is to place a number of desks together, which places students too far apart to quietly communicate with each other. Within each learning group students need to be able to see all relevant task materials, see each other, converse with each other without raising their voices, and exchange ideas and materials in a comfortable atmosphere. The groups need to be far enough apart so that they do not interfere with each other's learning.

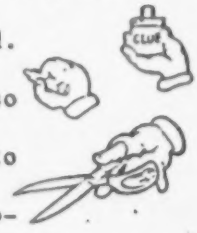
5. Planning the Instructional Materials to Promote Interdependence

The way teachers structure the materials to be used during a lesson can lead both to effective academic learning and positive interdependence among group members. When a group is mature and experienced and group members have a high level of collaborative skills, the teacher may not have to arrange materials in any specific way. When a group is new or when members are not very skilled, however, teachers may wish to distribute materials in carefully planned ways to communicate that the assignment is to be a joint (not an individual) effort and that the stu-

dents are in a sink or swim together learning situation. Three ways of doing so are:

a. Materials Interdependence: Give only one copy of the materials to the group. The students will then have to work together in order to be successful. This is especially effective the first few times the group meets. After students are accustomed to collaborating with each other, teachers will wish each student to have an individual copy of the materials.

b. Information Interdependence: Group members may each be given different books or resource materials to be synthesized. Or the materials may be arranged like a jigsaw puzzle so that each student has part of the materials needed to complete the task (Aronson, and others, 1978). Such procedures require that every member participate in order for the group to be successful.



c. Interdependence with Other Groups: Materials may be structured into a tournament format with intergroup competition as the basis to promote a perception of interdependence among group members. Such a procedure was introduced by DeVries and Edwards (1973) and extended by Slavin (1974). In the teams-games-tournament format, students are divided into heterogeneous cooperative learning teams to prepare members for a tournament in which they compete with the other teams. During the intergroup competition the students individually compete against members of about the same ability level from other teams. The

team whose members do the best in the competition is pronounced the winner.

All of these procedures may not be needed simultaneously. They are alternative methods of ensuring that students perceive that they must work together and behave collaboratively to succeed in the learning situation.

6. Assigning Roles to Ensure Interdependence

Cooperative interdependence may also be arranged through the assignment of complementary and interconnected roles to group members. An example is a science lesson we helped develop. Each group member is assigned a responsibility that must be fulfilled if the group is to function. For example, the group should have a summarizer-checker to make sure everyone in the group understands what is being learned; a researcher-runner to get needed materials for the group and to communicate with the other learning groups and the teacher; a recorder to write down the group's decisions and to edit the group's report; an encourager to reinforce members' contributions; and an observer to keep track of how well the group is collaborating. Assigning such roles is an effective method of teaching students collaborative skills.

With these decisions made and the appropriate materials prepared, the teacher is ready to explain the instructional task and the cooperative goal structure to the class. The less experience the students have in working in cooperative learning groups, the more important it is that teachers explain carefully what cooperation is.

TASK, GOAL STRUCTURE, LEARNING ACTIVITY

7. Explaining the Academic Task

Teachers should consider several aspects of explaining an academic assignment to students:

a. Set the task so that students are clear about the assignment. Most teachers have considerable practice with this. Instructions that are clear and specific are crucial in warding off student frustration. One advantage of cooperative learning groups is that these students can handle more ambiguous tasks (when appropriate) than can students working alone. In cooperative learning groups students who do not understand what they are to do will ask their group for clarification before asking the teacher.

b. Explain the objectives of the lesson and relate the concepts and information to be studied to students' past experience and learning to ensure maximum transfer and retention. Explaining the intended outcomes of the lesson increases the likelihood that students will focus on the relevant concepts and information throughout the lesson.

c. Define relevant concepts, explain procedures students should follow, and give examples to help students understand what they are to learn and to do in completing the assignment. To promote positive transfer of learning, point out the critical elements that separate this lesson from past learnings.

d. Ask the class specific questions to check the students' under-

standing of the assignment. Such questioning ensures that thorough two-way communication exists, that the assignment has been given effectively, and that the students are ready to begin completing it.

8. Structuring Positive Goal Interdependence

Communicate to students that they have a group goal and must work collaboratively. We cannot overemphasize the importance of communicating to students that they are in a sink or swim together learning situation. In a cooperative learning group students must understand that they are responsible for learning the assigned material, making sure that all other group members learn the assigned material, and making sure that all other group members successfully complete the assignments, in that order. Teachers can do this in several ways:

a. Ask the group to produce a single product, report, or paper. Each group member should sign the paper to indicate that he or she agrees with the answers and can explain why the answers are appropriate. Each student must know the material. When a group is producing only one product it is especially important to stress individual accountability. Teachers may pick a student at random from each group to explain the rationale for their answers.

b. Provide group rewards. A group grade is one way to emphasize the necessity for collaboration. A spelling group where the group members work with each other during the week to make sure that all members

know their words, so they can take the test individually, can be rewarded on the basis of the total number of words spelled correctly by all the members of the group. Math lessons can be structured so that students work in cooperative learning groups, take a test individually, receive an individual score, but are given bonus points on the basis of how many group members reach a preset level of excellence. Some teachers reward groups where all members reach a preset criterion of excellence with free-time or extra recess.

Positive interdependence creates peer encouragement and support for learning. Such positive peer pressure influences under-achieving students to become academically involved. Members of cooperative learning groups should give two interrelated messages: "Do your work--we're counting on you!" and "How can I help you to do better?"

9. Structuring Individual Accountability

The purpose of a cooperative learning group is to enhance the learning of each member. A learning group is not truly cooperative if individual members let others do all the work. In order to ensure that all members learn and that groups know which members to provide with encouragement and help, teachers will need to assess frequently the level of performance of each group member--by giving practice tests, randomly selecting members to explain answers, having members edit each other's work, or by randomly picking one paper from the group to grade. These are only a few ways individual accountability can be structured.

10. Structuring Intergroup Cooperation

The positive outcomes found within a cooperative learning group can be extended throughout a whole class by structuring intergroup cooperation other than through the competitive tournament format. Bonus points may be given if all members of a class reach a preset criterion of excellence. When a group finishes its work, the teacher should encourage the members to help other groups complete the assignment.

11. Explaining Criteria for Success

Rather than grading on a curve, evaluation within cooperatively structured lessons needs to be based on criteria established for acceptable work. Thus, at the beginning of the lesson teachers should clearly explain the criteria by which the students' work will be evaluated. The criteria for success must be structured so that students may reach it without penalizing other students and so that groups may reach it without penalizing other groups.

For some learning groups, all members can be working to reach the same criteria. For other learning groups, different members may be evaluated according to different criteria. The criteria should be tailored to be challenging and realistic for each individual group member. In a spelling group, for example, some members may not be able to learn as many as 20 words, and the number of words for such students can be reduced accordingly.

Teachers may structure a second level of cooperation not only by keeping track of how well each group and its members are performing, but also by setting criteria for the whole class to reach. Thus, the number

of words the total class spells correctly can be recorded from week to week with appropriate criteria being set to promote class-wide collaboration and encouragement. These criteria are important to give students information about what "doing well" means on assigned tasks, but they do not always have to be as formal as counting the number of correct answers. On some assignments, simply completing the task may be an adequate criterion for assessing the work of some students. For others, simply doing better this week than last week may be set as a criterion of excellence.

12. Specifying Desired Behaviors

The word cooperation has different connotations and uses. Teachers need to define cooperation operationally by specifying the behaviors that are appropriate and desirable within the learning groups. There are beginning behaviors, such as "stay with your group and do not wander around the room," "use quiet voices," "take turns," and "use each other's names." When groups begin to function more effectively, expected behaviors may include:

a. Have each member explain how to get the answer.

b. Ask each member to relate what is being learned to previous learnings.

c. Check to make sure everyone in the group understands the material and agrees with the answers the group has developed.

d. Encourage everyone to participate.

e. Listen accurately to what all group members are saying.

f. Encourage each member to be persuaded by the logic of the

answers proposed, not by group pressure; majority rule does not promote learning.

g. Criticize ideas, not people.

The list of expected behaviors should not be too long. One or two behaviors is enough for a few lessons. Students need to know what behavior is appropriate and desirable within a cooperative learning group, but they should not be subjected to information overload.

MONITORING AND INTERVENING

13. Monitoring Students' Behavior

The teacher's job begins in earnest when the cooperative learning groups start working. Resist that urge to get a cup of coffee or grade some papers. Just because the teacher places students in learning groups and instructs them to be cooperative does not mean that they will always do so. Therefore, much of the teacher's time should be spent in observing group members in order to see what problems they are having in completing the assignment and in working collaboratively. A variety of observation instruments and procedures that can be used for these purposes can be found in Johnson and Johnson (1984, 1987) and Johnson and F. Johnson (1987).

Whenever possible, teachers should use a formal observation sheet to count the number of times they observe appropriate behaviors being used by students. The more concrete the data, the more useful it is to the teacher and to students. Teachers should not try to count too many different behaviors at one time, especially when they start formal observation. At first they may just record who talks in each group to

get a participation pattern for the groups. Some help on observation can be found in a chapter describing systematic observation of cooperative groups in Learning Together and Alone (Johnson and Johnson, 1987). Our current list of behaviors (though rather long) includes: contributing ideas, asking questions, expressing feelings, actively listening, expressing support and acceptance (toward ideas), expressing warmth and liking (toward group members and group), encouraging all members to participate, summarizing, checking for understanding, relieving tension by joking, and giving direction to the group work.

We look for positive behaviors, which are to be praised when they are appropriately present and which are a cause for discussion when they are missing. It is also a good idea for the teacher to collect notes on specific student behaviors so that the frequency data is extended. Especially useful are skillful interchanges that can be shared with students later in the form of objective praise and perhaps with parents in conferences or telephone conversations.

Student observers can get even more extensive data on each group's functioning. For very young students the system must be kept very simple, perhaps only "Who talks?" Many teachers have had success with student observers, even in kindergarten.

One of the more important things the teacher can do is to make sure that the class is given adequate instructions (and perhaps practice) on gathering the observation data and sharing it with the group. The observer is in the best position to learn about the skills of working in

a group. We remember one 1st-grade teacher who had a student who talked all the time (even to himself while working alone). He dominated any group he was in. When the teacher introduced student observers to the class, she made the student an observer. (One important rule for observers is not to interfere in the task but to gather data without talking.) He gathered data on who talked and did a good job, noting that one student had done quite a bit of talking in the group while another had talked very little. The next day when he was back in the group and no longer the observer, he started to talk, clamped his hand over his mouth, and glanced at the new observer. He knew what behavior was being observed, and he didn't want to be the only one with marks for talking. The teacher said he may have listened for the first time all year. Thus the observer often benefits by learning about group skills.

Observers, moreover, often know quite a bit about the lesson. When teachers are worried about losing the lesson content, they can have the observer take the group through the material as a last review. Often important changes are made during this review.

It is not necessary to use student observers all the time, and we would not recommend their use until cooperative learning groups have been used a few times. In the beginning it is enough for teachers simply to structure the groups to be cooperative without worrying about structuring student observers, too. Whether student observers are used or not, however, teachers should always do some observing and spend time monitoring the groups. Sometimes a simple checklist is helpful in addition to a systematic observation form. Some questions to ask on the checklist might be: Are students practicing the specified behaviors, or

not? Do they understand the task? Have they accepted the positive interdependence and the individual accountability? Are they working toward the criteria and are the criteria for success appropriate?

14. Providing Task Assistance

In monitoring the groups as they work, teachers will wish to clarify instructions, review important procedures and strategies for completing the assignment, answer questions, and teach task skills as necessary. In discussing the concepts and information to be learned, teachers should use the language or terms relevant to the learning. Instead of saying, "Yes, that is right," teachers might say something more specific to the assignment, such as, "Yes, that is one way to find the main idea of a paragraph." The use of specific statements reinforces the desired learning and promotes positive transfer.

15. Intervening to Teach Collaborative Skills

While monitoring the learning groups, teachers sometimes find students without the necessary collaborative skills and groups with problems in collaborating. In these cases the teacher may intervene to suggest more effective procedures for working together and more effective behaviors for students to engage in. Teachers may also wish to intervene and reinforce particularly effective and skillful behaviors as they are noticed. The teacher at times is a consultant to a group. When it is obvious that group members lack the necessary collaborative skills to cooperate with each other, the coordinator will want to intervene to help the members learn these skills. Collaborative skills, along with

activities that may be used in teaching them, are covered in Johnson and Johnson (1987) and Johnson (1986, 1987).

Teachers should not intervene in the groups any more than is absolutely necessary. Most teachers are geared to jumping in and solving problems for students as they occur. With a little patience, we find that cooperative groups can often work their way through their own problems (task and maintenance) and acquire not only a solution, but also a method of solving similar problems in the future. Choosing when to intervene and when not to is part of the art of teaching, and teachers can usually trust their intuition. Even after intervening, teachers can turn the problem back to the group to solve. Many teachers intervene by having members set aside their task, pointing out the problem, and asking the group to come up with an adequate solution. The last thing teachers want is for the students to come running to the teacher with every problem.

For example, a 3rd-grade teacher noticed while passing out papers that one student was leaning back away from the other three group members. A moment later, the three students marched over to the teacher and complained that Johnny was under the table and wouldn't come out. "Make him come out!" they insisted (the teacher's role: police officer, judge, and executioner). The teacher told them that Johnny was a member of their group and asked what they had tried. The children were puzzled. "Yes, have you asked him to come out?" the teacher suggested. The group marched back, and the teacher continued passing out papers. A moment later, the teacher glanced at their table and saw no heads

above the table (which is one way to solve the problem). Shortly, four heads came struggling out from under the table, and the group (including Johnny) went back to work with great energy.

We don't know what happened under that table, but whatever it was, it was effective. What makes this story even more interesting is that the group received a 100 percent on the paper and later, when the teacher was at Johnny's desk, she noticed he had the paper clutched in his hand. The group had given Johnny the paper and he was taking it home. He confided to the teacher that this was the first time he could ever remember earning a 100 percent on anything in school. (If that was your record, you might slip under a few tables yourself.)

The best time to teach cooperative skills is when the students need them. It is important that the cooperative skills be taught in the appropriate context, or are practiced in that setting, because transfer of skill learning from one situation to another cannot be assumed. Students learn about cooperative skills when they are taught them, and learn cooperative skills when applying them in science, math, or English. The good news about cooperative skills is that they are taught and learned like any other skill. At a minimum:

a. Students need to recognize the need for the skill.

b. The skill must be defined clearly and specifically including what students should say when engaging in the skill.

c. Practice of the skill must be encouraged. Sometimes just the teacher standing nearby with a clipboard and pencil will be

enough to promote student enactment of the skill.

d. Students should have the time and procedures to discuss how well they are using the skill.

e. Students should persevere in the practice until the skill is appropriately internalized. We never drop a skill, we only add on.

For older students (upper elementary school and above) the skills have been worked out and summarized in Joining Together (Johnson and F. Johnson, 1987) and Reaching Out (Johnson, 1986). For younger students, teachers may need to revise and rename cooperative skills. Some primary teachers use symbols like traffic signs with a "green light" encouraging participation, a "stop sign" meaning time to summarize, and "slippery when wet" meaning "Say that over again; I didn't quite understand."

Sometimes a more mechanistic structure is beneficial for young students. In one 1st-grade class, there were a number of students who liked to dominate and take over the group. One day, in frustration, the teacher formed groups and handed each group member five poker chips with a different color for each group member. The students were instructed to place one chip in a box every time they spoke while working on the worksheet. A student could not speak after all his or her chips were "spent." When all the chips were in the box, they could get their five colored chips back and start again. Several students were surprised when they discovered their five chips were the only ones in the box!

Teachers need only use these devices once or twice to get the message across. This technique was later used in a monthly principals' meeting. As the principals came in, each was handed several colored strips of paper. When they spoke . . .

Teaching cooperative skills is necessary for implementing cooperative learning groups into a classroom. We recommended that only a few skills be taught each semester. Most curriculum programs with cooperative learning groups written into them feature about five to eight cooperative skills for one year.

16. Providing Content Closure to the Lesson

At the end of the lesson, students should be able to summarize what they have learned and to understand where they will use it in future lessons. To reinforce student learning, teachers may wish to summarize the major points in the lesson, ask students to recall ideas or give samples, and answer any final questions they may have.

EVALUATING AND PROCESSING

17. Evaluating the Quality of Students' Learning

The product required from the lesson may be a report, a single set of answers agreed upon by all group members, the average of individual examination scores, or the number of group members reaching a specific criterion. As we pointed out earlier, whatever the product, student learning needs to be evaluated by a criteria-referenced system. The procedures for setting up and using such an evaluation system are given in Johnson and Johnson (1987). In addition to an assessment on how well

they are learning the assigned concepts and information, group members should also receive feedback on how effectively they collaborated. Some teachers give two grades, one for achievement and one for collaborative behavior.

18. Assessing How Well the Group Functioned

An old rule concerning observations of groups states that if you observe, you also must process those observations with the group. Processing need not occur in depth every day, but should happen often. Even if class time is limited, some time should be spent talking about how well the groups functioned today, what things were done well, and what things could be improved. Whole-class processing can include some feedback from the teacher (the principal observer) and some observations from members of the class. This can often include having a group share with the class an incident in their group and how they solved it. Names need not be used, but the feedback should be as specific as possible.

Groups new to processing often need an agenda, including specific questions each group member must address. A simple agenda might request each group to name two things they did well (and document them) and one thing they need to do even better, or would like to work harder on.

The time spent in discussing how well the group functioned is well spent, since each small group has two primary goals: (a) to accomplish the task successfully, and (b) to build and maintain constructive relationships in good working order for the next task. If a group is growing properly, it will become more and more effective. Often during

the "working" part of the class period, students will be very task-oriented, and the "maintenance" of the group may suffer. During the processing time, however, the emphasis is on maintenance of the group, and the students leave the room ready for (a better?) tomorrow. If no processing is done, teachers may find the group's functioning decaying, and important relationships left undiscussed. Processing the functioning of the group needs to be taken as seriously as accomplishing the task. The two are very much related. Teachers often have students turn in a "process sheet" along with the paper required from the task assignment. Teachers will want to have a structured agenda or checklist for the groups to work with during the processing as inexperienced groups tend to say, "We did fine. Right? Right!" and not deal with any relevant issues.

Group processing should focus both on members' contributions to each other's learning and to the maintenance of effective working relationships among group members. In order to contribute to each other's learning, group members need to attend class, to have completed the necessary homework required for the group's work, and to have provided needed explanations and examples. Absenteeism and lack of preparation often demoralize other members. A productive group discussion is one in which members are present and prepared and there should be some peer accountability to be so.

On the other hand, learning groups are often exclusively task oriented and ignore the importance of maintaining effective working relationships among members. Group sessions should be enjoyable, lively

and pleasant. If no one is having fun, something is wrong. Problems should be brought up and solved, and there should be a continuing emphasis on improving the effectiveness of the group members in collaborating with each other.

CONCLUSIONS

These 18 aspects of structuring learning situations cooperatively blend together to make effective cooperative learning groups a reality in the classroom. They may be used in any subject area with any age student. Teachers who have mastered these strategies and integrated cooperative learning groups into their teaching often say, "Don't say it is easy!" There is a lot of pressure to teach like everyone else is teaching, to have students learn alone, and to not let students look on each other's papers. Students will not be accustomed to working together and are likely to have a competitive orientation. It isn't easy, but it is worth the effort.

Another bit of advice would be to start small and build. Pick a time in the school day when you are pretty sure it would work, plan carefully, and don't rush the process. Cooperative learning groups should evolve into a teacher's program rather than to become a part of every class on the first day.

The good news is that many of your students will do well immediately. While two groups may struggle because of a lack of group skills, five will do well. Celebrate the five and problem solve with the two. Keep in mind that the students who are most difficult to integrate into groups are often the ones who need the peer support and positive peer

pressure the most. Resist that advice you were given as a beginning teacher to isolate students who pester others or show that they lack interpersonal skills; instead, concentrate on integrating them into their peer group effectively. Other students often have the most powerful influence on isolated, alienated students. Such students cannot be allowed to plod through school disconnected, lonely, and bitter.

In addition, cooperative, supportive relationships are just as productive for adults as they are for students. Teachers are more effective when they have positive support from colleagues and can solve problems together. Teachers need to give some thought to establishing their own cooperative group as they implement cooperation in their classrooms.

It is also important to repeat that we would be disappointed if we visited a teacher's classroom and saw only cooperative learning groups. The data are clear. Cooperation should produce better results in school than having student work alone, individualistically or competitively. Yet there is an important place for competitive and individualistic goal structures within the classroom. The major problems with competition and individualistic efforts result from overuse or inappropriate use.

In addition to cooperative skills, students need to learn how to compete for fun and enjoyment (win or lose) and how to work independently, following through on a task until completion. The natural place for competitive and individualistic efforts is under the umbrella of cooperation. The predominant use of cooperation reduces the anxiety and evaluation apprehension associated with competition. It also allows for using individualistically structured learning activities as part of a

division of labor within cooperative tasks. But, most of all, students should learn how to work together and to give each other support in learning. Some teachers weave the three goal structures together: setting up individual responsibility (accountability to the group), peer teaching, competing as a light change of pace, and ending in a cooperative project. Thus, they do what schools should do--prepare students to interact effectively in cooperative, competitive, and individualistic structures.

IMPLEMENTATION

OF

COOPERATIVE

LEARNING

Getting Started with Cooperative Groups

David W. Johnson, Roger T. Johnson and Edythe Johnson Holubec

To begin using cooperative learning groups there are a number of stages teachers may go through. Once a teacher has made a decision to try cooperative learning, there may be an initial rather awkward use within which the lessons may not go well because both the students and the teacher are new to a system of using cooperative groups for instructional purposes. There are a number of "start up" issues such as teaching students the cooperative skills they need to work together effectively, and training students in how to move into and out of groups quickly and quietly. Once both the teacher and the students become used to the system of cooperative learning, then a stage of mechanically using cooperative learning procedures may set in. Teachers follow the general procedures for implementing cooperative learning in a step-by-step fashion, planning each lesson, and reviewing recommended procedures before each lesson. It may take teachers a year to reach this stage. Finally, when the cooperative learning strategies are fully integrated into the teachers' repertoires, teachers reach the routine-use level in which lessons may be automatically structured for cooperative learning situations without conscious thought or planning. The concurrent focus on academic and collaborative skills takes place spontaneously. It may take teachers two years to reach this stage. Some advice that may be helpful is:

1. Do not try to move this fast. Start with a single lesson. Move to conducting at least one cooperative lesson per week and then to

© Appears in Structuring Cooperative Learning: The 1987 Lesson-Plan Handbook by D. W. Johnson, R. T. Johnson, and E. J. Holubec. Edina, MN: Interaction Book Company, 1987.

modifying a curriculum unit to be primarily cooperative.

2. Persevere! Do not stop growing in your use of cooperative learning even though some students are not very skillful and no one else in your school seems to care. Lay out a long-range plan and stay with it. Especially persevere with students who have a hard time collaborating with peers.

3. Seek support from one or more colleagues and engage in joint sharing of successes, problems, new ideas, and curriculum modification.
4. Plan carefully for the start of each school year so that cooperative learning is emphasized right away.

Within this article practical advice is presented in order to help teachers move from the initial to routine stages of using cooperative learning strategies.

Assigning Students to Learning Groups

There are many different ways to assign students to learning groups. The following sections contain some suggestions for grouping students. For further methods, along with a number of warm-up strategies, see R. Johnson and Johnson (1985).

Stratified Random

1. Rank order students from highest to lowest in terms of a pretest on the unit, a recent past test, past grades, or your best guess as a teacher.
2. Select the first group by choosing the highest student, the

lowest student, and the two middle achievers. Assign them to the group unless they are all of one sex, they do not reflect the ethnic composition of the class, they are worst enemies, or they are best friends. If any of these are true, move up or down one student from the middle to readjust.

3. Select the remaining groups by repeating the above procedure with the reduced list. If there are students left over, make one or two groups of three members.

The same procedure may be used for assigning students to groups of three or two members.

Numbering

Divide the number of students in the class by the size of the group you wish to use (30 students divided by 3 = 10). Have students number off by the result (e.g., 10). Then have the students with the same number find each other.

Teachers may include handing out materials that have a number or symbol on them and ask students to find their classmates with the same number or symbol. Teachers may also pass out cards with a number or symbol on them to assign students to learning groups.

There are many variations to this procedure. Teachers may place a list of words on the board, such as a list of colors, animals, countries, rocks, or plants, and have students "word off." You need the same number of words as groups you wish to assign students to.

Roger's favorite variation is to count off in a different language (e.g., English, Spanish, French, Hungarian) each time students are

assigned to groups. His rule is that any language may only be used one time during a semester or year.

Reducing Isolation

1. Ask students to list three peers with whom they would like to work.
2. Identify the isolated students who are not chosen by any other of their classmates.
3. Build a group of skillful and supportive students around each isolated student.

Math Method

There are endless variations to the math method of assigning students to groups. The basic structure is to give each student a math problem and ask students whose problems have the same answer to group together. This may vary from simple addition in the first grade to complex equations in high school classes. Thus, to form a group of three, the following three equations may be distributed throughout the class (3 + 3 = ; 4 + 2 = ; 5 + 1 =).

States and Capitols

To assign students to groups of two or four the following procedure may be used. Divide the number of students in the class by two (30 divided by 2 = 15). Pick a geographic area of the U.S. and write out on cards the names of 15 states. Then on another set of cards write out the names of their capitol cities. Shuffle the cards

and pass them out to students. Then have the students find the classmate who has the matching state or capitol. To form groups of four, have two adjacent states and their capitols combine.

Historical Characters

Give each student a card with the name of a historical character. S/he can then find the other members of their group on the basis of the historical period in which the characters lived. Variations include grouping according to the occupation of the person, country they came from, or significant event or accomplishment.

Geographical Areas

List a number of countries or states and have students group themselves according to most preferred to visit. Variations include grouping according to least preferred to visit, similar in terms of climate, similar in geological features, and so forth.

Literature Characters

Give students individual cards with the names of characters in the literature they recently have read. Ask them to group with the characters from the same story, play, or poem. Examples include Romeo and Juliet; Captain Hook, Peter Pan and Wendy; and Hansel, Gretel, Ginger-Bread-House Witch, and Step-Mother.

Preferences

Have students write their favorite sport to participate in on a slip of paper. Then have them find groupmates who like to participate in the same sport. Variations include favorite food, celebrity, skill, car,

president, animal, vegetable, fairy tale character, and so forth.

Helpful Hints

1. Explain to the class that before the year is over, everyone will work in a group with everyone else and, therefore, if you are not in a group with someone you would like to be, do not worry about it. The next group will be different.
2. Ask the students to help ensure that the groups are heterogeneous in terms of sex, ethnicity, and ability. In order to build constructive relationships between majority and minority students, between handicapped and nonhandicapped students, and even between male and female students, use heterogeneous cooperative learning groups with a variety of students within each learning group.
3. Before the students start to move into their groups say, "I would like you to take responsibility to make sure that everyone is included in a group. Before you begin the group task, look around the room. If you see someone who is not in a group, invite them to join your group or another group that has fewer members.

Starting Up Advice

An advantage of group work is that students become more directly involved in their learning and thereby learn more and enjoy it more. Specifically, students get immediate feedback on how well they learned, teach their peers, see learning strategies modelled, and verbalize what they learn. A disadvantage of group work is that many students don't

know how to work effectively in groups, so problems arise. To minimize these problems, try the following:

1. Make up the groups yourself. Each group should have a high, medium, and low-achieving student in it, with a mix of sexes, cultural groups, and motivation levels in order to be most powerful. Do not put students with their friends unless you have a good reason. If students protest their group membership, explain that you will make new groups later on, so they won't always be with the same people.
2. Seat students close to their group members. This makes it quick and easy for you to get them in and out of their groups.
3. Start out with small groups. Groups sized two or three are best until students become skillful in including everyone. Then proceed carefully to four if you wish.
4. Integrate group work into your curriculum. Anything one can do, two can do better. Have them drill each other in pairs over material taught. Review for tests in trios. On some assignments, have them do the work individually first, then decide on group answers. They can certify each other's papers for accuracy, then you can pick one paper to grade. Three students can discuss chapter questions and turn in one paper for the group. The more oral discussion and summarizing of material the students do, the more they will learn.

5. Assign each student a job or role. Possibilities include Reader, Recorder, Checker (makes certain everyone knows and can explain the answers by having group members summarize), Encourager (encourages full participation by asking silent members what they think or what they have to add), and Praiser (praises good ideas or helpful group members).

6. Make your expectations of group behavior clear. *I expect to see everyone staying with the group, contributing ideas, listening carefully to other group members, making certain everyone is included in the work, and making certain everyone understands and agrees.*

7. Observe and question while students are working. Ask anyone you don't think is helping to explain an answer. Make it clear to the group that it is responsible for making sure all group members participate and know the answers. Expect that some groups will finish before other groups; check over their work and have them correct any glaring errors, then let them review, talk quietly, study, or read until the other groups are finished.

8. After each session, have each group answer: *What did we do well today in working together? What could we do even better tomorrow?* Let them know what you saw them do. Be positive and reward positive behaviors.

Some Quick Cooperative Starters

Although we have found few limits to the number of ways Cooperative Learning groups can be used, here are some ideas to get you started.

1. Turn to Your Neighbor. Three to five minutes. Ask the students to turn to a neighbor and ask h/her something about the lesson: to explain a concept you've just taught; to explain the assignment; to explain how to do what you've just taught; to summarize the three most important points of the discussion, or whatever fits the lesson.
2. Reading Groups. Students read material together and answer the questions. One person is the Reader, another the Recorder, and the third the Checker (who checks to make certain everyone understands and agrees with the answers. They must come up with three possible answers to each question and circle their favorite one. When finished, they sign the paper to certify that they all understand and agree on the answers.

3. Jigsaw. Each person reads and studies part of a selection, then teaches what he or she has learned to the other members of the group. Each then quizzes the group members until satisfied that everyone knows his or her part thoroughly.
4. Focus Trios. Before a film, lecture, or reading, have students summarize together what they already know about the subject and come up with questions they have about it. Afterwards, the trios answer questions, discuss new information, and formulate new questions.
5. Drill Partners. Have students drill each other on the facts they need

to know until they are certain both partners know and can remember them all. This works for spelling, vocabulary, math, grammar, test review, etc. Give bonus points on the test if all members score above a certain percentage.

6. **Reading Buddies.** In lower grades, have students read their stories to each other, getting help with words and discussing content with their partners. In upper grades, have students tell about their books and read their favorite parts to each other.

7. **Worksheet Checkmates.** Have two students, each with different jobs, do one worksheet. The Reader reads, then suggests an answer; the Writer either agrees or comes up with another answer. When they both understand and agree on an answer, the Writer can write it.

8. **Homework Checkers.** Have students compare homework answers, discuss any they have not answered similarly, then correct their papers and add the reason they changed an answer. They make certain everyone's answers agree, then staple the papers together. You grade one paper from each group and give group members that grade.

9. **Test Reviewers.** Have students prepare each other for a test. They get bonus points if every group member scores above a preset level.

10. **Composition Pairs.** Student A explains what s/he plans to write to Student B, while Student B takes notes or makes an outline. Together they plan the opening or thesis statement. Then Student B explains while Student A writes. They exchange outlines, and use them in writing their papers.

11. **Board Workers.** Students go together to the chalkboard. One can be the Answer Suggester, one the Checker to see if everyone agrees, and one the Writer.

12. **Problem Solvers.** Give groups a problem to solve. Each student must contribute to part of the solution. Groups can decide who does what, but they must show where all members contributed. Or, they can decide together, but each must be able to explain how to solve the problem.

13. **Computer Groups.** Students work together on the computer. They must agree on the input before it is typed in. One person is the Keyboard Operator, another the Monitor Reader, a third the Verifier (who collects opinions on the input from the other two and makes the final decision). Roles are rotated daily so everyone gets experience at all three jobs.

14. **Book Report Pairs.** Students interview each other on the books they read, then they report on their partner's book.

15. **Writing Response Groups.** Students read and respond to each other's papers three times:

    a. They mark what they like with a star and put a question mark anywhere there is something they don't understand or think is weak. Then they discuss the paper as a whole with the writer.

    b. They mark problems with grammar, usage, punctuation, spelling, or format and discuss it with the author.

c. They proofread the final draft and point out any errors for the author to correct.

Teachers can assign questions for students to answer about their group members' papers to help them focus on certain problems or skills.

16. Skill Teachers/Concept Clarifiers. Students work with each other on skills (like identifying adjectives in sentences or showing proof in algebra) and/or concepts (like "ecology" or "economics") until both can do or explain it easily.

17. Group Reports. Students research a topic together. Each one is responsible for checking at least one different source and writing at least three notecards of information. They write the report together; each person is responsible for seeing that h/her information is included. For oral reports, each must take a part and help each other rehearse until they are all at ease.

18. Summary Pairs. Have students alternate reading and orally summarizing paragraphs. One reads and summarizes while the other checks the paragraph for accuracy and adds anything left out. They alternate roles with each paragraph.

19. Elaborating and Relating Pairs. Have students elaborate on what they are reading and learning by relating it to what they already know about the subject. This can be done before and after reading a selection, listening to a lecture, or seeing a film.

20. Playwrights. Students write a play together, perhaps about a time period recently studied, practice, and perform it for the class.

A Few More Tips About Cooperative Start-Up

Some Ways to Ensure Positive Interdependence

1. One pencil, paper, or book given to a group
2. One paper written from a group
3. Task divided into jobs; it can't be finished unless all help
4. Pass one paper around the group, each member must do a part
5. Jigsaw materials; each person learns a part and then teaches it to the group
6. A reward (like bonus points) if everyone in the group succeeds

Some Ways to Ensure Individual Accountability

1. Students do the work first to bring to the group
2. Pick one student at random to orally answer questions studied by the group
3. Everyone writes, then certifies correctness of all papers; you pick one to grade
4. Listen and watch as students take turns orally rehearsing information
5. Assign jobs or roles to each student
6. Students get bonus points if all group members do well individually

Some Expected Behaviors to Tell Students
(Pick four or five that fit)

1. Everyone contributes and helps
2. Everyone listens to others with care
3. Encourage everyone in your group to participate
4. Praise helpful actions or good ideas
5. Ask for help if you need it
6. Check to make sure everyone understands
7. Stay with your group
8. Use quiet voices

Some Things To Do When Monitoring

1. Give immediate feedback and reinforcement for learning
2. Encourage oral elaboration and explanation
3. Reteach or add to teaching
4. Determine what group skills students have mastered
5. Encourage and praise use of good group skills
6. Determine what group skills to teach students next
7. Find out interesting things about your students

Some Ways to Process Group Interactions

Small Groups

1. What did your group do well in working together today?
2. What could your group do even better tomorrow?

Whole Class

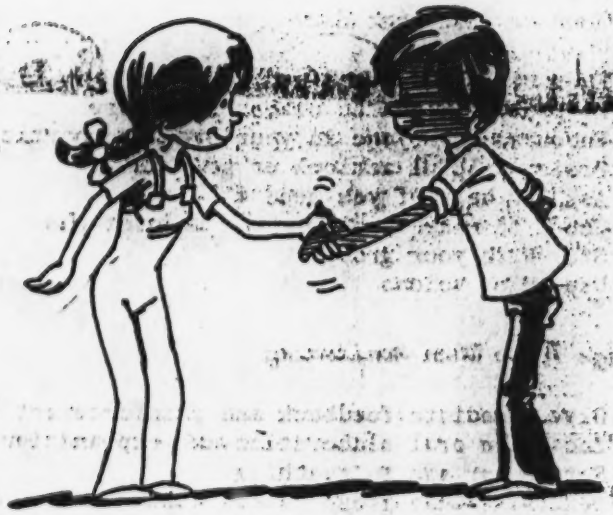
1. What skills did we do well in working together today?
2. What skills could we do even better tomorrow?

Individual (Self)

1. What did you do well in helping your group today?
2. What could you do even better tomorrow?

Individual (Other)

1. Name one thing a group member did which helped your group.
2. Tell your group members that you appreciated their help.



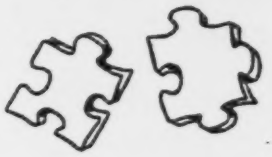
Jigsawing Materials

One way to structure positive interdependence among group members is to use the jigsaw method of creating resource interdependence. The steps for structuring a "jigsaw" lesson are:

1. Distribute a set of materials to each group. The set needs to be divisible into the number of members of the group (2, 3, or 4 parts). Give each member one part of the set of materials.
2. Assign students the individualistic tasks of:
   a. Learning and becoming an expert on your material.
   b. Planning how to teach the material to the other members of the group.
3. Assign students the cooperative task of meeting with someone else in the class who is a member of another learning group and who has learned the same material and share ideas as to how the material may best be taught. This is known as an "expert pair" or "expert group."
4. Assign students the cooperative tasks of:
   a. Teaching their area of expertise to the other group members.
   b. Learning the material being taught by the other members.
5. Assess students' degree of mastery of all the material. Reward the groups whose members all reach the preset criteria of excellence.

Jigsaw is a flexible way of structuring positive interdependence among group members and teachers have developed many variations. Here are several modifications that are helpful in different circumstances:

1. Substitute pairs for individuals during Step 2.
2. Give students subtopics and have them use reference materials and the library to research their subtopic. This frees the teacher from having to arrange materials in advance.
3. Have the group write a report or give a class presentation on the overall topic, with the specification that it include all the subtopics presented in the group.
4. Prepare outlines or study guides of what each subtopic should cover and have students read the same text, organizing and becoming experts on the material highlighted by their outline or study guide.*



Some Favorite Roles

Roles are assigned to students in order to create positive interdependence and to teach students new skills. There are two types of roles to assign: working roles (like Reader, Recorder, and Materials Handler) and skill roles (like Encourager, Checker, and Prober). Both of these types help the group function and help students learn to be valuable group members. Students will learn new roles if those roles are carefully defined, watched for, and rewarded. The following are possible definitions of some roles to get you started.

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* More specific instructions for each step of the jigsaw may be found in Cooperation in the Classroom by David W. Johnson and Roger T. Johnson. Edina, MN: Interaction Book Company, 1984.

Reader: Reads the group's material out loud to the group, carefully and with expression, so that group members can understand and remember it.

Writer: Carefully records the best answers of the group on the worksheet or paper, gets the group members to check and sign the paper, then turns it in to the teacher.

Materials Handler: Gets any materials or equipment needed by the group, keeps track of them, and puts them carefully away.

Encourager: Watches to make certain that everyone is participating, and invites reluctant or silent members to participate. Sample statements: *Jane, what do you think? Robert, do you have anything to add? Nancy, help us out. Juanita, what are your ideas on this?*

Checker: Checks on the comprehension or learning of group members by asking them to explain or summarize material learned or discussed. Sample statements: *Terry, why did we decide on this answer for number two? James, explain how we got this answer. Anne, summarize for us what we've decided here.*

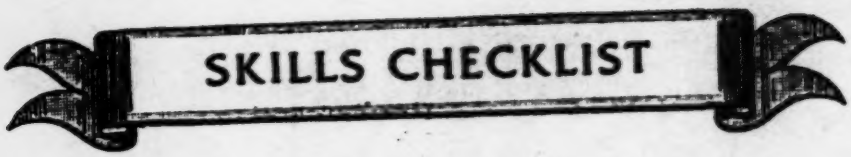
Praiser: Helps members feel good about their contributions to the group by telling them how helpful they are. This is a good role to assign to help combat "put-downs." Sample statements: *That's a good idea, Al. Sharon, you're very helpful. Karen, I like the way you've helped us. Good job, John.*

Prober: In a pleasant way, keeps the group from superficial answers by not allowing the members to agree too quickly. Agrees

when satisfied that the group has explored all the possibilities. Sample statements: *What other possibilities are there for this problem or questions? What else could we put here? Let's double-check this answer.*

Some other role possibilities include: **Noise Monitor** (uses a non-verbal signal to remind group members to quiet down), **Energizer** (energizes the group when it starts lagging), **Summarizer** (summarizes the material so that group members can check it again), **Asker for Help, Time Keeper,** Question Asker, and Paraphraser. Come up with roles that fit the task and your students.

Johnson, Johnson and Holubec



Check off the skills your students can do.
Star the skills you are currently teaching (no more than four!).
Put an arrow by the skill you will choose next (when they are ready).

Forming Skills

_____ Moving into groups quietly

_____ Staying with the group

_____ Using quiet voices

_____ Encouraging everyone to participate

_____ Keeping hands and feet to self

_____ Looking at the group's paper

_____ Using people's names

_____ Looking at the speaker

_____ Using no "put-downs"

Functioning Skills

_____ Stating and restating the purpose of the assignment

_____ Setting or calling attention to time limits

_____ Offering procedures on how to most effectively do task

_____ Expressing support and acceptance verbally

_____ Expressing support and acceptance nonverbally

_____ Asking for help or clarification

_____ Offering to explain or clarify

_____ Paraphrasing and clarifying other members' contributions

_____ Energizing the group with humor, ideas, or enthusiasm

_____ Describing feelings when appropriate

Formulating Skills

_____ Summarizing the material aloud

_____ Seeking accuracy by correcting and/or adding to summaries

_____ Seeking elaboration by relating to other learning or knowledge

_____ Seeking clever ways of remembering ideas and facts

_____ Demanding vocalization of other members' reasoning processes

_____ Asking members to plan aloud how to teach material to others

Fermenting Skills

_____ Criticizing ideas without criticizing people

_____ Differentiating where there is disagreement

_____ Integrating different ideas into a single position

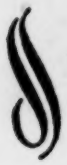
_____ Asking for justification of others' conclusions or ideas

_____ Extending other members' answers or conclusions

_____ Probing by asking questions that lead to deeper analysis

_____ Generating further answers

_____ Testing reality by checking group's work against instructions



Checklist for Teachers' Role in Cooperative Learning

Check off the areas you are comfortable doing.
Star the areas you are currently working to master.
Put an arrow by the area you will tackle next, when you are ready.

_____ Specifying academic objectives

_____ Specifying cooperative objectives

_____ Deciding on group size

_____ Assigning students to groups

_____ Arranging the room

_____ Planning materials

_____ Assigning roles

_____ Explaining the academic task

_____ Structuring positive interdependence

_____ Structuring individual accountability

_____ Structuring intergroup cooperation

_____ Explaining criteria for success

_____ Specifying desired behaviors

_____ Monitoring students' behavior

_____ Providing task assistance

_____ Intervening to teach collaborative skills

_____ Providing closure to the lesson

_____ Evaluating the quality and quantity of students' learning

_____ Having groups process their effectiveness

_____ Doing whole-class processing

_____ Having individuals process their effectiveness

_____ Teaching needed cooperative skills

_____ Observing for cooperative skills taught

_____ Giving feedback on cooperative skill use

_____ Rewarding skillful groups

_____ Rewarding skillful students

_____ Using student observers

_____ Demonstrating cooperative groups to other professionals

STUDENT ROLES

IN

COOPERATIVE

LEARNING

observer, and how they could work to improve their contributions to the group. Finally, lead a discussion on how well the groups worked together. Be careful to model good processing techniques by sticking close to actual observations and stressing positive behaviors. This processing is an important part of the lesson, so always leave time for it.

READER

READS THE PROBLEM ALOUD TO THE GROUP.

ENCOURAGER

WATCHES TO MAKE SURE EVERYONE IS PARTICIPATING AND INVITES EVERYONE TO JOIN IN.

CHECKER

CHECKS TO MAKE SURE ALL GROUP MEMBERS UNDERSTAND HOW TO SOLVE EACH PROBLEM

OBSERVER

RECORDS THE ACTIONS OF EACH GROUP MEMBER ON AN OBSERVATION SHEET; DOES NOT PARTICIPATE IN SOLVING STORY PROBLEMS

SOCIAL SKILLS

IN

COOPERATIVE

LEARNING

Social Skill Behaviors

I. FORMING

Staying with the group

Using quiet voices

Encouraging everyone to participate

Taking turns

Using first names

Keeping hands (and feet) to self

Looking at the speaker

No put-downs

II. FUNCTIONING

Organizing group's work

Praising

Watching the clock

Asking for help

Asking questions

Offering explanations

Paraphrasing others

Clarifying ideas

Energizing the group

Describing one's feelings

III. FORMULATING

Summarizing

Checking answers

Seeking elaborations

Helping the group remember

Giving explanations "out loud"

Planning "out loud"

IV. FERMENTING

Criticizing ideas, not people

Differentiating ideas

Integrating ideas

Asking for reasonings, rationale

Adding further information or new ideas

Brainstorming many answers

Challenging conclusions with other information

Check off the skills your students can do.
Star the skills you are currently teaching (no more than four!).
Put an arrow by the skill you will choose next (when they are ready).

Forming Skills

_____ Moving into groups quietly

_____ Staying with the group

_____ Using quiet voices

_____ Encouraging everyone to participate

_____ Keeping hands and feet to self

_____ Looking at the group's paper

_____ Using people's names

_____ Looking at the speaker

_____ Using no "put-downs"

Functioning Skills

_____ Stating and restating the purpose of the assignment

_____ Setting or calling attention to time limits

_____ Offering procedures on how to most effectively do task

_____ Expressing support and acceptance verbally

_____ Expressing support and acceptance nonverbally

_____ Asking for help or clarification

_____ Offering to explain or clarify

_____ Paraphrasing and clarifying other members' contributions

_____ Energizing the group with humor, ideas, or enthusiasm

_____ Describing feelings when appropriate

Formulating Skills

_____ Summarizing the material aloud

_____ Seeking accuracy by correcting and/or adding to summaries

_____ Seeking elaboration by relating to other learning or knowledge

_____ Seeking clever ways of remembering ideas and facts

_____ Demanding vocalization of other members' reasoning processes

_____ Asking members to plan aloud how to teach material to others

Fermenting Skills

_____ Criticizing ideas without criticizing people

_____ Differentiating where there is disagreement

_____ Integrating different ideas into a single position

_____ Asking for justification of others' conclusions or ideas

_____ Extending other members' answers or conclusions

_____ Probing by asking questions that lead to deeper analysis

_____ Generating further answers

_____ Testing reality by checking group's work against instructions

GROUP PROCESSING

IN

COOPERATIVE LEARNING

GROUP PROCESSING

Did everyone contribute ideas?

Did we share our materials?

Did we ask for everyone's ideas?

Did we make sure everyone in the group understood?

Did we help, encourage, and finish our work?

PROCESSING QUESTIONS

DIRECTIONS: Put one sentence on the board each day. Have group discuss and finish sentence.

THE MOST HELPFUL THING ANYONE DID TODAY WAS.....

WE ARE REALLY GOOD AT.....

WE COULD DO BETTER AT.....

ONE WORD WE WOULD USE TO DESCRIBE HOW OUR GROUP WORKED TODAY IS.....

WHEN SOMEONE IN OUR GROUP WAS NOT CONTRIBUTING IDEAS, WE.....

TODAY WE REALLY NEEDED SOMEONE TO.....

I REALLY FELT GOOD WHEN OTHER MEMBERS OF MY GROUP.....

If these sentences stems don't apply make up one that does

Non-Listening Behaviors

T-Chart

Looks Like	Sounds Like

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OBSERVATION SHEET

SKILL	GROUP MEMBERS		
Asks for Help			
Shares Ideas			
Gives Help			

COMMENTS:

Teacher Observation Sheet

	Monday	Tuesday	Wednes	Thurs	Friday
Listens to each other					
Asks if doesn't know					
Encourages each other					
Says kind things					

ADD-ON OBSERVATION SHEET

Start by teaching one skill and observing for it. Show students how well they do in practicing that skill; praise and otherwise reward their efforts. When they have mastered one skill, add and teach a second skill, etc.

DATE _____ PERIOD _____ OBSERVER _____

Cooperative Skills	Group Members			

Other Observation Notes:

STUDENT

LESSONS

SECTION 1

COOPERATION

COMPETITION

On this page build a collage of people working or playing Cooperatively. Cut out pictures of cooperative activities and paste them in the frame below.

If you don't have magazines or newspapers, draw a picture in the frame of a cooperative activity.

COOPERATION

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Now see how many words you can think of that remind you of Cooperation. Write them on the lines below. (We've put in a few to get you started.)

we sharing group

In this frame we've given you space to build a collage of pictures you've found to show **Competition**. Just cut them out and past them in the frame.

If you'd rather, you can draw a picture of a competition.

COMPETITION

On the lines below, write words or phases that you think are **Competitive** words. (We've included a few examples.)

loser beat against

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Cooperation and Competition

There are a list of sentences below. If you think the sentence describes something that sounds or looks **cooperative**, draw a line from it to the **cooperation** picture. If you think it describes something **competitive**, draw a line from the sentence to the **competitive** picture.

We'll have fun doing this together!

Let's see if we can put our heads together and figure out the answer!

O.K., Paul, run your fastest! We have to beat the other team!

Four people, sitting in a circle, listening to one member reading a page in a workbook.

I think I can get the best grade in the class on this paper!

Write a sentence that describes something cooperative.

_____

_____

Write a sentence that describes something competitive.

_____

_____

Working Together

Listed below are three reasons why you will find that cooperation helps you, both in and out of school. You will:

1. Learn more and remember it longer.
2. Be able to "stand in friends' shoes" and look at things the way they do.
3. Make more friends and get to know others better.

Now it's your turn. What reasons can you think of to work with others to get things done? Please make a list below.

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Cooperation Is Where You Find It

Listed below are words which go with **COOPERATION.** See if you can find each word and circle it. The words can either go down or across. Discuss the meaning of each word with your group.

Q	C	A	K	F	O	Y	N	U	H	E	K
A	O	R	H	W	E	A	J	Q	A	R	E
S	O	C	I	A	L	S	K	I	L	L	S
M	P	E	M	Z	P	O	G	D	I	O	H
W	E	L	P	S	U	P	P	O	R	R	A
G	R	O	U	P	C	H	L	A	C	H	R
O	A	S	T	X	E	A	F	L	A	P	I
F	T	O	G	E	T	H	E	R	R	O	N
R	E	N	C	O	U	R	A	G	I	N	G
S	O	L	I	D	M	E	V	E	N	S	L
H	R	T	O	N	G	E	O	N	G	E	N

together
sharing
we
encouraging
cooperate
caring
group
support
others
social skills

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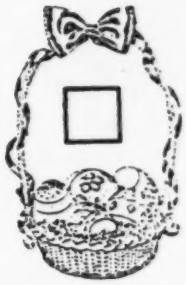
Times Together and Alone

Some activities are better if you do them alone, but most are better if more than one does them. Look at the activities below, and see how many persons you think would do each thing best. Write that number in the box beside the activity.

Reading a Book ☐

Working on the Computer ☐

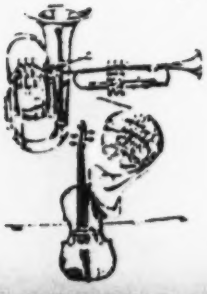


☐ Coloring Easter Eggs

Going Camping ☐

Building a Snowman ☐

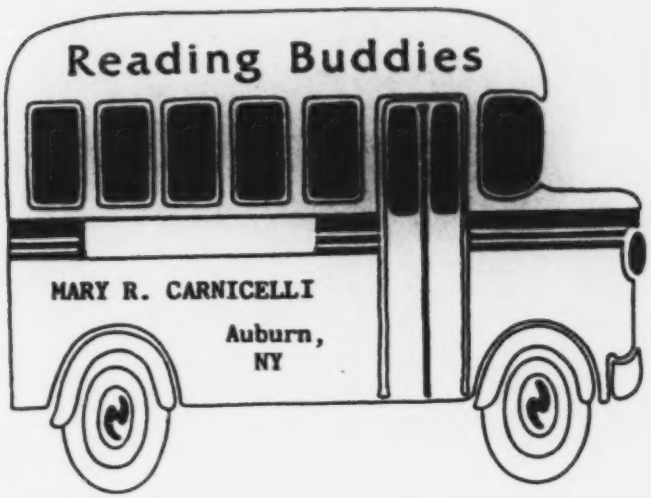
Washing Your Dog ☐



Playing a Song in an Orchestra ☐

Swinging ☐

Cooking a Meal ☐



Subject Area: Reading

Grade Level: Elementary

Lesson Summary: Students read a story from their readers in pairs, alternating paragraphs.

Instructional Objectives: Students will gain practice in the oral reading skills of fluency and expression, with the added benefit of increased comprehension.

Materials:

ITEM	NUMBER NEEDED
Reading text	One per student

Time Required: Thirty minutes (depending on length of story)

© Appears in Structuring Cooperative Learning: The 1987 Lesson-Plan Handbook by D. W. Johnson, R. T. Johnson, and Edythe Johnson Holubec. Edina, MN: Interaction Book Company, 1987.

Decisions

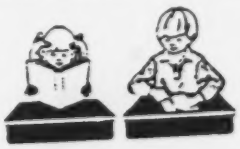
Group Size: Two

Assignment to Groups: Teacher assigned, with a fluent reader teamed with a less fluent reader.

Roles: Reader and Listener; they will alternate roles with each paragraph.

The Lesson

Instructional Task:



You are to take turns and each read a paragraph while the other listens. Offer help to decode and blend if help is requested by your partner.

Positive Interdependence:

You will read one story together, alternating reading with each paragraph.

Individual Accountability:

Read your paragraphs the best you can, asking your partner for help if you need it. Listen carefully to your partner's paragraphs and give him or her help if needed.

Criteria for Success:

Groups which help each other read with expression and fluency will be chosen to dramatize the story to the class (or a lower grade!.

Expected Behaviors

I expect to see you keeping your place in the book, listening carefully to your partner, reading clearly and with expression while

paying attention to punctuation marks, and helping your partner if needed. I want you to continue to read until I tell you to stop, be patient with your partner, and offer to help.

Monitoring and Processing

Monitoring: Circulate, listening for fluency and expression and watching to make certain they are doing the expected behaviors.

Intervening: Intervene if groups need help with the reading or expected behaviors.

Processing: As a whole class, ask the students whether they listened carefully and helped their partners. Tell them what you saw them do well and you saw that would help them do better next time.

Closing: Stress the importance of fluency and expression in relation to comprehension.

AUTHOR'S NOTE

This lesson could be expanded to (1) groups of three students; (2) one text to be passed around the group, thus forcing better listening skills and positive interdependence; or (3) a list of comprehension questions for the group to complete collaboratively.

Subject Area: Spelling

Grade Level: Primary

Lesson Summary: Students learn spelling words together.

Instructional Objectives: Students will learn to read and write spelling words and know their definitions.

Materials:

ITEM	NUMBER NEEDED
Sesame Street character role tags	One set per group
Spelling worksheets	One per student
Pencils	One per student
Teacher Observation Sheet*	One for teacher

* Note: The Teacher Observation Sheet from an earlier lesson (see page 114) would also be appropriate for this lesson.

Time Required: One spelling session

© Appears in Structuring Cooperative Learning: The 1987 Lesson-Plan Handbook by D. W. Johnson, R. T. Johnson, and E. J. Holubec. Edina, MN: Interaction Book Company, 1987.

Decisions

Group Size: Three

Assignment To Groups: Teacher assigned, with one high, one low, and one middle achieving student in each group.

Roles:
The Count = The Teller
Ernie = The Asker
The Cookie Monster = The Listener

The Lesson

Instructional Task:

Today, instead of having you do your work all alone, I'm going to let you work together and be teachers for each other (hand out the role tags to tape on each student). *Before we begin, each one of you is going to have a little job. Those of you who are The Count today are going to tell the people in your group what your task is and when it's their turn. Ernie is going to make sure everyone understands or asks when they don't get it. And The Cookie Monster is going to make sure we all listen to each other. I am going to listen in while you work and see how the Sesame Street characters are doing with their roles and give a quick report when the work is done. Also, The Count in each group will report on how well his or her group worked together. All of you will turn in your papers, but The Count will put his or her paper on top of the group's papers, and that paper will be the one graded to see if the group earns a star. Be sure that all the papers look the same as The Count's paper and that everyone knows how to read, spell, and tell the meaning of the words.*

Explain how to do the spelling worksheet you chose to use with this lesson. Then add: *Your group must agree on each answer before you can write it on your own paper. Then, make sure that each of you writes the word four times on your own worksheet. When you are finished, check everyone's paper to make sure all answers are correct. After that, stack your papers together and put The Count's paper on top. Sign The Count's paper to show you agree with those answers.*

Positive Interdependence:

Roles, one paper graded.

Individual Accountability:

Everyone writes, everyone signs in agreement of The Count's paper.

Criteria for Success:

18 - 20 points .....

16 - 17 points .....

15 or below .....

I also will pick someone from your group at random to read or spell or tell the meaning of one of the words. Make sure everyone is prepared to represent your group.

Expected Behaviors:

I expect to see everyone helping, everyone listening carefully to the group members, and everyone doing his or her job.

Monitoring and Processing

Monitoring: Observe each group for short periods of time and record observations on the Teacher Observation Sheet.

Intervening: Intervene if a group needs guidance to ensure participation, agreement, and consideration of each other.

Ending: Give a content check-up quiz, written or oral. If written, pick four words, dictate, match meaning. If oral, choose one child from each group to spell the word dictated and tell the meaning. Or, have children read the word on the board identified by: *Read word number one (or number three, etc.)*. If children get stuck, encourage them to get help from their group.

Processing: Give groups one minute to discuss how they did. Then, briefly, have each tell whether their group finished the task and how they felt while working together. Report on how many points the class received in the categories on the Teacher Observation Sheet.

Note: This lesson was reprinted from Structuring Cooperative Learning: The 1980 Handbook by Virginia Lyons (Ed.). Edina, MN: Interaction Book Company, 1980.

The Teller

1) Tell the group members when it's their turn.
2) Report on how well the group worked together.
3) Has his/her paper graded for the group.

The Asker

1) Make sure everyone understands or asks when they don't get it.

The Listener

1) Make sure everyone listens to each other.

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OBSERVATION SHEET

	GROUP MEMBERS		
SKILL			
Helps			
Listens			
Does his/her job			

COMMENTS:

Cooperative Reasoning in Math

Subject Area: Mathematics

Grade Level: Primary

Lesson Summary: Students use arithmetic sentences to solve story problems requiring mathematical reasoning and one or two computations.

Instructional Objectives: Students will gain practice in using arithmetic sentences to solve story problems requiring mathematical reasoning and one or two computations.

Materials:

ITEM	NUMBER NEEDED
Story problem sheet	One per group
Observation sheet	One per group*
Pencil	One per group
Counters or number lines	One per student

*Optional

Time Required: Thirty to forty minutes

© Appears in Structuring Cooperative Learning: The 1987 Lesson-Plan Handbook by D. W. Johnson, R. T. Johnson, and E. J. Holubec. Edina, MN: Interaction Book Company, 1987.

Decisions

Group Size: Three (four, if an observer if used)

Assignment To Groups: Teacher assigned, with one high, one medium, and one low achieving math student in each group

Roles: One student in a group of four will be the Observer. That student will not participate in solving the story problems, but will watch the group and tally under the question mark when students ask questions and tally under the period when students give information.

The Lesson

Instructional Task:

I am going to give each of your groups a set of ten story problems. Someone in your group should be able to read the problems. Your job is to read each story problem, write a math sentence telling what happened in the story, and then figure out the missing number. You can use counters or number lines to help you.

Positive Interdependence:

I want one set of answers from the group that you helped with and agree on.

Individual Accountability:

When you have finished, each of you should sign your name to your group's paper. That means that you helped, shared, and understand.

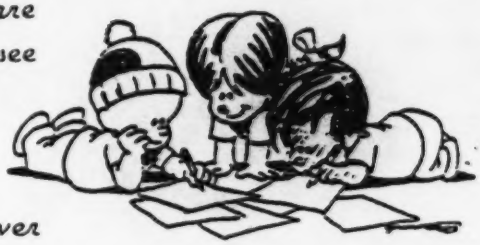
Criteria for Success:

Your group should try to answer all of the problems correctly. If

your group gets 9 or 10 correct, you have done a super job!

Expected Behaviors:

I expect to see all of you helping and all of you sharing. If you don't understand or agree, ask the others in your group to explain that problem again. If you still think they are wrong, explain your answer to them and see if they agree with you.



Explain Observer Role:

I will pick one of you to be the observer of the group. That student will not participate in solving the story problems, but will watch the group and tally under the question mark when students ask questions and tally under the period when students give information. (Show the students the observation sheet and explain how to use it.)

Monitoring and Processing

Monitoring: Do this with as little interference as possible.

Intervening: Occasionally ask individuals to explain one of their group's answers.

Evaluating and Processing: As a group finishes the task, quickly score the answers. Ask each member of the group if s/he participated and how s/he felt about the task. Then ask the observer to share what s/he noticed about "asking" and "telling" behaviors in the group. Spend two to three minutes with each group to initiate this procedure until students become skillful at discussing group processes. Give praise and/or rewards to groups that get 9 or 10 correct.

AUTHOR'S NOTE

Evaluate the lesson by determining whether the students met the conditions you set out. Did all or most of the groups solve the story problems correctly? Do you need to teach more on story problems in the future? Also, did the students demonstrate understanding of the cooperative goal structure? What cooperative skills need to be taught in future lessons?

Note: This lesson was reprinted from Structuring Cooperative Learning: The 1979 Handbook by R. Chasnoff (Ed.). Edina, MN: Interaction Book Company, 1979.

Story Problems

1. Jan has 7 balls. She gave 2 to her friend. How many balls does Jan have left?

2. Ted has 3 boats. He got 6 more. How many boats does Ted have now?

3. Kim has 5 hats. Her friend has 2 hats. Who has more hats, Kim or her friend? How many more hats has Kim?

4. Sam has 4 library books. He returned the 4 library books to the library. How many library books does he have now?

5. Don has 4 pennies. He wants to buy a candy bar that costs 9 pennies. How many more pennies does Don need to buy the candy bar?

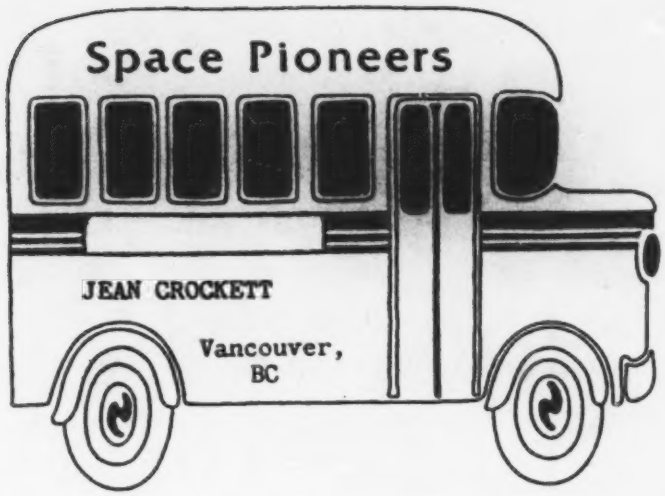
6. Sue has 6 cookies. She gave 3 cookies away to friends. How many cookies does Sue have left for herself?

7. Jan gave 2 rings to one friend and 3 rings to another. Jan has 4 rings left for herself. How many rings did Jan have to start with before she gave any away?

8. Joe lost 3 pencils. Now he has 6 left. How many pencils did Joe have before losing any?

9. Mom had 10 plates. She broke 4 plates. Mom went out and bought 2 new plates. How many good plates does Mom have now?

10. Bob had 3 pennies. He found 4 more pennies. Then Bob spent 6 pennies. How many pennies does he have now?



Subject Area: Social Studies

Grade Level: Primary

Lesson Summary: Students will group to form a family prior to moving to a new community in space.

Instructional Objectives: Students will determine the survival skills, cooperative efforts, and materials needed to build a space community.

Materials:

ITEM	NUMBER NEEDED
Gym mat (or a suitable arrangement of of four chairs)	One per group
Pencil	One per greoup
Space Community Worksheet	One per group

Time Required: One class period

© Appears in Structuring Cooperative Learning: The 1987 Lesson-Plan Handbook by D. W. Johnson, R. T. Johnson, and E. J. Holubec. Edina, MN: Interaction Book Company, 1987.

Decisions

Group Size: Four

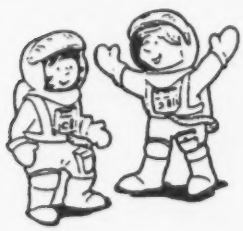
Assignment To Groups: Teacher assigned with sex and ability-level heterogeneity.

Roles: Recorder: Student who assumes oldest familial role in the space group will record the family name and list of space needs.

The Lesson

Instructional Task:

Students choose a position/role within the new space family. Make the stipulation that each family may include only one father, one mother, and no one can be younger than in real life. Suggest additional roles of grandparents, teenagers, aunts, uncles.



Then the family selects a group surname. It may by the "father's" name or one preferred generally by the group.

Finally, the family generates a list of 15 items it considers most important in building a new community. (Remind them that space suits are an essential first item.)

Positive Interdependence:

The group members must come to consensus on the list of survival items and sign the sheet with their actual first names and the chosen family surname.

Individual Accountability:

Any member of the family can be called on to read the selected items and explain the importance of any given item.

Criteria for Success:

The family agrees on a name and list and behaves in a way that would make it an important part of the new community.

Expected Behaviors:

Tell the students that you will be watching for the following forming skills:

1. Moving without noise
2. Staying with the group
3. Using 30 centimeter voices
4. Using names
5. Looking at the speaker
6. Helping complete the group's work

In addition, you will be listening for clarifying questions.

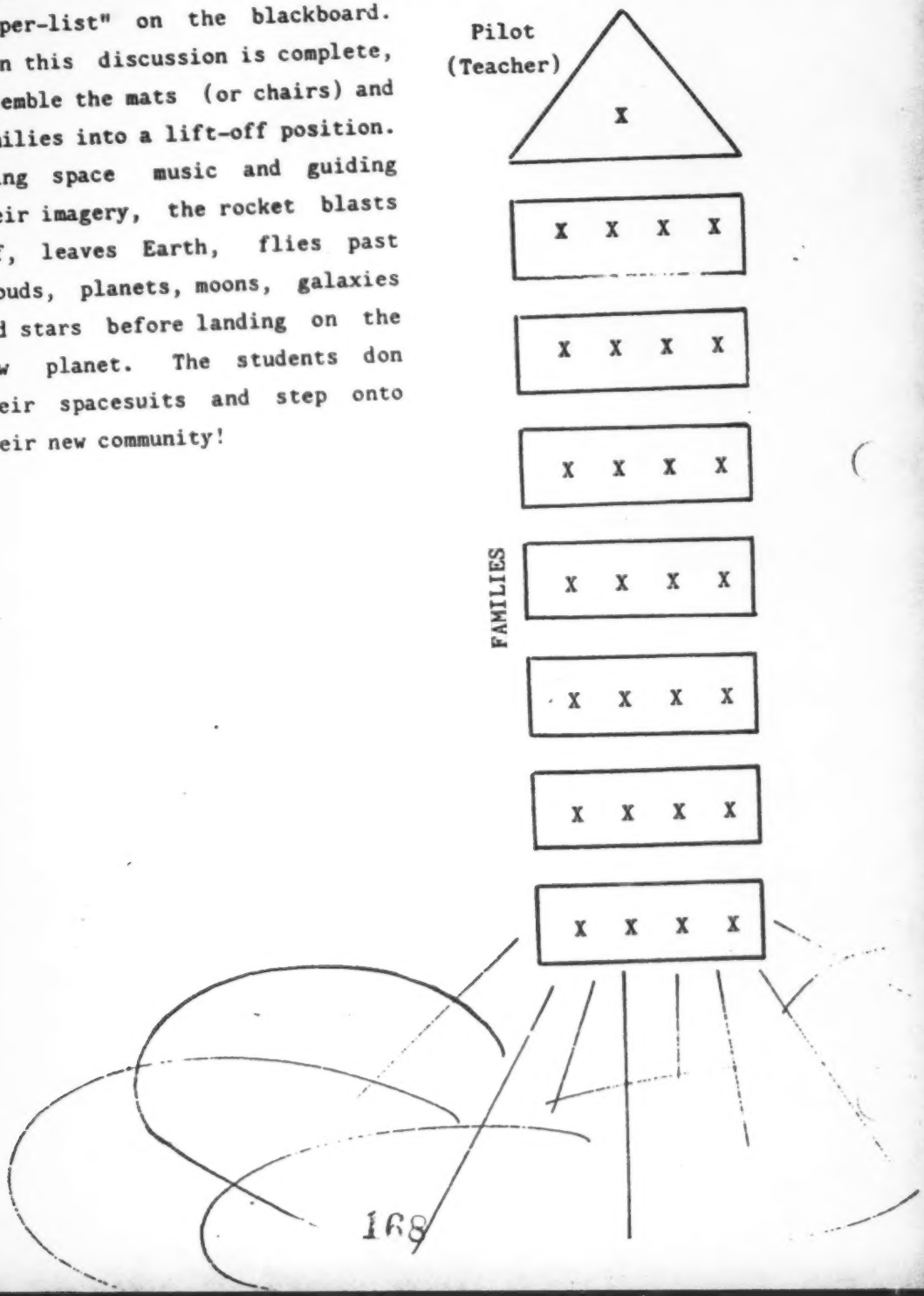
Monitoring and Processing

Monitoring: Teacher will use the observation sheet to record the frequency of use of the forming skills. Any clarifying questions may be noted verbatim on the sheet for later sharing.

Processing: Call on family members randomly to discuss how they worked together as a family in the new community. Ask what they might do to improve. Share with the class any clarifying questions you heard.

Ending: Choose a member from each group to contribute one item from

his/her family's list. Put this "super-list" on the blackboard. When this discussion is complete, assemble the mats (or chairs) and families into a lift-off position. Using space music and guiding their imagery, the rocket blasts off, leaves Earth, flies past clouds, planets, moons, galaxies and stars before landing on the new planet. The students don their spacesuits and step onto their new community!



SPACE PLAN

These are the things we need when we start our space community.

Signed:

FORMS

Appendix E

Student Social Skill Check List

	Always	Occasionally	Seldom	Never
1. Accepts responsibility for actions	_____	_____	_____	_____
2. Listens to others	_____	_____	_____	_____
3. Cooperates with peers without prompting	_____	_____	_____	_____
4. Gives compliments to peers	_____	_____	_____	_____
5. Accepts peers' ideas for group activities	_____	_____	_____	_____
6. Uses time wisely	_____	_____	_____	_____
7. Completes tasks on time	_____	_____	_____	_____
8. Follows directions	_____	_____	_____	_____

Adapted from the Grades K-6 Social Studies Questionnaire by Gresham and Elliott.

Appendix H

Teacher Pre- and Posttest

Cooperative Learning

1. Name the three ways teachers can structure lessons.

   a.

   b.

   c.

2. What are three of the five basic elements of Cooperative Learning?

   a.

   b.

   c.

3. Name four roles in which a student may serve during cooperative learning groups.

   a.

   b.

   c.

   d.

4. Name three ways in which cooperative classrooms differ from traditional classrooms.

   a.

   b.

   c.

5. In the cooperative classroom, the teacher serves as a _____

   _____

6. Name the four main tasks the teacher must perform in implementing cooperative learning.

a.

b.

c.

d.

7. In order for a lesson to be structured cooperatively there must be both an _____ and _____ _____ objective.

8. What type of grouping, heterogeneous or homogenous (circle one) is most commonly used in cooperative learning?

9. What is the final step in every cooperative lesson?

10. Name three positive outcomes which can result from using cooperative learning according to research.

a.

b.

c.

Teacher Pre- and Posttest

Cooperative Learning

Answer Key

1. Name the three ways teachers can structure lessons.

   a. Cooperatively

   b. Individually

   c. Competitively

2. What are three of the five basic elements of Cooperative Learning?

   a. Positive Interdependence

   b. Individual Accountability

   c. Social Skills Development

   d. Face-to-face Interaction

   e. Group Processing

3. Name four roles in which a student may serve during cooperative learning groups.

   a. Encourager

   b. Recorder

   c. Observer

   d. Checker

   e. Reader

4. Name three ways in which cooperative classrooms differ from traditional classrooms.

   a. Positive Interdependence

   b. Heterogeneous Grouping

   c. Shared Leadership

5. In the cooperative classroom, the teacher serves as a Facilitator.

6. Name the four main tasks the teacher must perform in implementing cooperative learning.

   a. Make Decisions

   b. Set the Lesson

   c. Monitor and Intervene

   d. Evaluate and Process

7. In order for a lesson to be structured cooperatively there must be both an ___academic___ and ___social skill___ objective.

8. What type of grouping, heterogeneous or homogenous (circle one) is most commonly used in cooperative learning? (Heterogeneous)

9. What is the final step in every cooperative lesson?

   Processing

10. Name three positive outcomes which can result from using cooperative learning according to research.

    a. Both academic and social skills are developed

    b. Helps mainstreamed students to be accepted more readily.

    c. Current teaching strategies such as Process Writing, Whole Language, Hands-On Science, Math, and Social Studies can be easily incorporated into Cooperative Learning.

Workshop Rating Form

Please rate this workshop on each scale by checking the number which most closely matches your opinion. Highest values are 5, the lowest 1.

1. Relevance. Did this workshop address topics relevant to your teaching role?

   1 2 3 4 5

2. Future Use. Do you believe that you will have occasion to use concepts or materials from this session in your teaching or other educational role?

   1 2 3 4 5

3. Organization. Was the session well organized?
   Comments: Easy to follow.

   1 2 3 4 5

4. Substance. Was the content of the session substantial, important, and thorough?
   Comments:

   1 2 3 4 5

5. Methodology. Did the presenter use effective techniques for accomplishing the purposes of the session?
   Comments: Good visuals.

   1 2 3 4 5

6. Comprehensiveness. Was the training intensive enough in terms of time spent?
   Comments:

   1 2 3 4 5

Developed by Terri Legget, Assistant Principal, Gemini Elementary.

Leadership Rating Form

Please rate the effectiveness of the leader on each scale by marking the number which most closely matches your opinion. Highest values are 5, the lowest 1.

1. The leader had knowledge and expertise.

   1 2 3 4 5

2. The leader displayed ability to involve participants in the learning process.

   1 2 3 4 5

3. It was evident that there was planning and preparation.

   1 2 3 4 5

4. The leader used effective techniques in training.

   1 2 3 4 5

5. The leader was available and helpful.

   1 2 3 4 5

6. The leader provided the necessary activities, materials, and documents.

   1 2 3 4 5

7. The leader was effective in getting the participants to cooperate.

   1 2 3 4 5

8. The leader was successful in keeping the participants on task.

   1 2 3 4 5

9. Rate the overall effectiveness of the leader's style of leadership.

   1 2 3 4 5

Developed by Terri Legget, Assistant Principal at Gemini Elementary.

SUGGESTED PROGRAM IMPLEMENTATION TIME LINE

COOPERATIVE LEARNING LESSON PLAN I

TITLE _____

YOUR NAME _____

SCHOOL AND DISTRICT _____

SUBJECT AREA _____ GRADE LEVEL _____

LESSON SUMMARY _____

_____

_____

INSTRUCTIONAL OBJECTIVES _____

_____

_____

MATERIALS NEEDED _____

_____

_____

TIME REQUIRED _____ GROUP SIZE _____

ASSIGNMENT TO GROUPS _____

_____

ROLES (Name and explain) _____

_____

_____

_____

_____

THE LESSON

TASK _____

_____

_____

_____

_____

_____

_____

POSITIVE INTERDEPENDENCE _____

INDIVIDUAL ACCOUNTABILITY _____

CRITERIA FOR SUCCESS _____

EXPECTED BEHAVIORS _____

MONITORING AND PROCESSING

MONITOR FOR _____

INTERVENE IF _____

PROCESS BY _____

END BY _____

(Attach any materials needed to run the lesson)

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QUANT	Books	AMT
	COOPERATION IN THE CLASSROOM by David and Roger Johnson and Edythe Johnson Holubec, revised ed., 1988. A foundation for structuring classrooms in a cooperative goal setting where students are interested in each other's learning. Contains a set of practical strategies for structuring cooperative learning groups and specific suggestions for teaching collaborative skills to students. ISBN 0-939603-04-7 $25.00	
	ADVANCED COOPERATIVE LEARNING by David and Roger Johnson and Edythe Johnson Holubec, 1988. This is an extension of the material in Cooperation in the Classroom. It covers the areas of integrating the goal structures; teaching students cooperative, leadership, trust and communication skills; acceptance of differences; reaching out to colleagues; and the future of cooperative learning. ISBN 0-939603-07-1 $25.00	
	LEADING THE COOPERATIVE SCHOOL by David and Roger Johnson, 1988. The leadership role in implementing cooperative learning in a district is presented with an emphasis on promoting cooperative learning in the classroom, colleagial support groups among teachers and administrators, and a cooperative school-based decision-making procedure. ISBN 0-939603-08-X $15.00	
	CIRCLES OF LEARNING (revised and expanded 2nd edition) by David and Roger Johnson and Edythe Holubec, 1990. An overview of cooperative learning. The essential components of successful cooperative learning, the teacher's role, and the teaching of social skills to students are all covered. Cooperation among teachers is also discussed. An excellent introduction to cooperative learning. ISBN 0-939603-01-3 $10.00	
	STRUCTURING COOPERATIVE LEARNING: LESSON PLANS FOR TEACHERS 1987 edited by David and Roger Johnson and Edythe Holubec. Features original lessons from network teachers across the US and Canada. These lessons provide samples for various grade levels and subject areas. An invaluable guide for classroom teachers beginning to implement cooperative learning. ISBN 0-939603-00-4 $15.00	

Prices subject to change in accordance with publishing costs.

Winter 1990

	COOPERATION AND COMPETITION: THEORY AND RESEARCH by David and Roger Johnson, 1989. A comprehensive meta-analysis of all the research conducted in the area of cooperative and competitive strategies. This single volume will provide a conclusive rationale for the use of cooperative techniques in every classroom. ISBN 0-939603-10-1 $20.00	
	CREATIVE CONFLICT by David and Roger Johnson, 1988. A comprehensive treatment of how to (structure intellectual/academic conflicts within cooperative learning groups and (2) build a peer-mediation program within the classroom and school. Intellectual conflicts are created to promote creativity, higher-level reasoning, critical thinking, and long-term retention. Participation in peer mediation teaches students important life-long skills. ISBN 0-939603-03-9 $50.00	
	OUR COOPERACTIVE CLASSROOM by David and Roger Johnson, Judy Bartlett, and Linda Johnson, 1988. A variety of student activities geared to primary grades. Close to 100 pages of ventures to enhance the enjoyment and appreciation by students of cooperative learning and the social skills involved. ISBN 0-939603-06-6 $10.00	
	COOPERATIVE LEARNING: WARM-UPS, GROUPING STRATEGIES AND GROUP ACTIVITIES edited by David and Roger Johnson, 1985. A variety of activities designed to assign students to groups, build group cohesion, and teach social skills. ISBN 0-939603-11-X $ 7.50	
	COOPERATIVE LEARNING AND COMPUTERS by Mary Male, David and Roger Johnson and Mary Anderson, 1987. This activity guide for teachers provides a comprehensive set of cooperative computer lessons for use in the classroom. $15.00	
	LEARNING TOGETHER AND ALONE: COOPERATIVE, COMPETITIVE AND INDIVIDUALISTIC LEARNING (2nd ed.) by David and Roger Johnson, 1987. This book provides the teacher with a method for systematically using cooperation and individualization in the classroom besides presenting the theory and rationale behind the use. ISBN 0-13-527871-6 $20.00	
	JOINING TOGETHER: GROUP THEORY AND GROUP SKILLS (3rd ed.) by David and Frank Johnson, 1987. An integration of theory and exercises in an inquiry approach to learning about group dynamics. Very helpful for persons who want to use groups effectively. ISBN 0-13-510488-3 $37.00	
	REACHING OUT: INTERPERSONAL EFFECTIVENESS AND SELF-ACTUALIZATION (nd ed.) by David Johnson, 1990. This book seeks to provide the theory and experiences necessary to develop interpersonal skills. It is more than a book of exercises: The theory presented placed the exercises within a context that will give meaning to the reader's experiences. ISBN 0-13-783561-9 $26.00	
	HUMAN RELATIONS AND YOUR CAREER: A GUIDE TO INTERPERSONAL SKILLS (2nd ed.) by David Johnson, 1987. This book presents the theory and skill-building experiences necessary to develop the interpersonal skills essential for employability and career success. ISBN 0-13-448743-9 $25.00	

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QUANT	Movies and Videotapes	AMT
	CIRCLES OF LEARNING by David and Roger Johnson, 1983. 32-minute VHS videotape presenting specific procedures for structuring cooperative lessons, teaching students social skills, and having learning groups process how effectively they are functioning. Both elementary and secondary procedures are presented $50.00 AVAILABLE ALSO AS 16mm color film. $400.00	
	BELONGING by David and Roger Johnson, 1981. 27-minute VHS videotape presenting a case study of a junior high school handicapped student being mainstreamed into a classroom where the teacher is using cooperative learning groups. A realistic case study rather than an idealized picture of cooperative learning. $50.00 AVAILABLE ALSO AS 16mm color film. $350.00	
	CONTROVERSY IN THE CLASSROOM by David and Roger Johnson, 1979. 12-minute VHS videotape showing 5th and 6th grade students reenacting a structured cooperative controversy. $25.00 AVAILABLE ALSO AS 16mm color film. $200.00 (Note: This film is specifically intended for use with courses on conflict.)	

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Appendix J

Comparison of Pre- and Post-Program

Results of Student Social Skill Checklist

I. Number of students who improved in 3 of 8 social skills.

Class A	4	
Class B	7	22% Improved
Class C	7	
Class D	5	
Total	23	

II. A. Number of students completing tasks on time

Class A	3	
Class B	5	13% Improved
Class C	6	
Class D	0	
Total	14	

B. Number of students using time wisely

Class A	3	
Class B	2	11% Improved
Class C	5	
Class D	2	
Total	12	

C. Number of students completing tasks on time.

Class	Completes	Improvement	Total
A	22	3	25
B	6	5	11
C	12	6	18
D	16	0	16

Total of 67% of students complete tasks on time.

III. Nineteen students or 18% had "Always" (the highest rating) in all areas on the pretest and posttest Social Skills Checklist.

Appendix K

Comparison of the Results of the Teacher Pretest and Posttest of Cooperative Learning Techniques

Number Correct out of 10

Pretest	Posttest
Teacher A - 3	Teacher A - 10
Teacher B - 3	Teacher B - 10
Teacher C - 2	Teacher C - 10
Teacher D - 4	Teacher D - 10
Total 12	Total 40

Mean Scores

Pretest	Posttest
12 ÷ 4 = 3	40 ÷ 4 = 10

10 - 3 = 7 Total mean score increase

Appendix L

Results of Teacher Survey
Post-Inservice

Workshop Rating Form

Please rate this workshop on each scale by checking the number which most closely matches your opinion. Highest values are 5, the lowest 1.

1. Relevance. Did this workshop address topics relevant to your teaching role?

   1 2 3 4 5 **4 of 4 rated 5**

2. Future Use. Do you believe that you will have occasion to use concepts or materials from this session in your teaching or other educational role?

   1 2 3 4 5 **4 of 4 rated 5**

3. Organization. Was the session well organized?

   1 2 3 4 5 **4 of 4 rated 5**

4. Substance. Was the content of the session substantial, important, and thorough?

   1 2 3 4 5 **4 of 4 rated 5**

5. Methodology. Did the presenter use effective techniques for accomplishing the purposes of the session?

   1 2 3 4 5 **4 of 4 rated 5**

6. Comprehensiveness. Was the training intensive enough in terms of time spent?

   1 2 3 4 5 **4 of 4 rated 5**

7. Comments:

Borrowed from Terri Legget, Assistant Principal at Gemini Elementary.

Appendix M

Results of Teacher Survey
Post-Inservice
Leadership Rating Form

Please rate the effectiveness of the leader on each scale by marking the number which most closely matches your opinion. Highest values are 5, the lowest 1.

1. The leader had knowledge and expertise.

   1 2 3 4 5 **4 of 4 rated 5**

2. The leader displayed ability to involve participants in the learning process.

   1 2 3 4 5 **4 of 4 rated 5**

3. It was evident that there was planning and preparation.

   1 2 3 4 5 **4 of 4 rated 5**

4. The leader used effective techniques in training.

   1 2 3 4 5 **4 of 4 rated 5**

5. The leader was available and helpful.

   1 2 3 4 5 **4 of 4 rated 5**

6. The leader provided the necessary activities, materials, and documents.

   1 2 3 4 5 **4 of 4 rated 5**

7. The leader was effective in getting the participants to cooperate.

   1 2 3 4 5 **4 of 4 rated 5**

8. The leader was successful in keeping the participants on task.

   1 2 3 4 5 **4 of 4 rated 5**

9. Rate the overall effectiveness of the leader's style of leadership.

   1 2 3 4 5 **4 of 4 rated 5**